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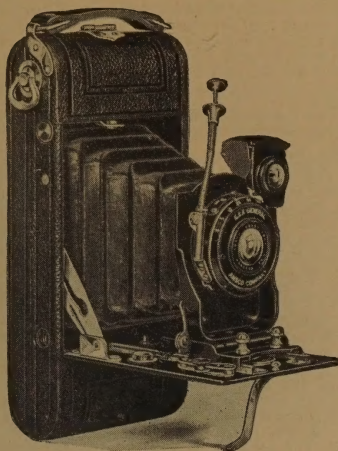
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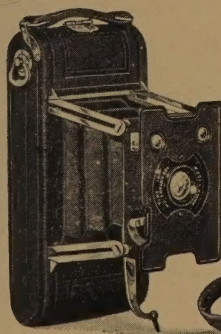
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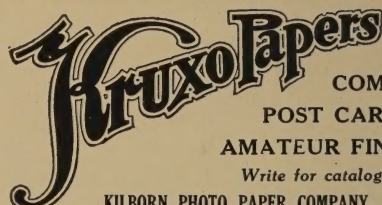
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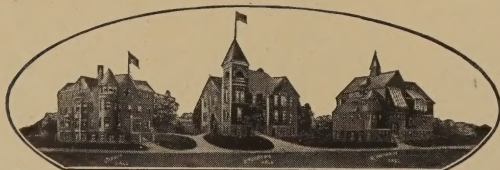
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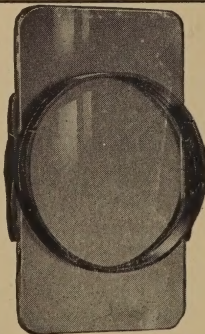
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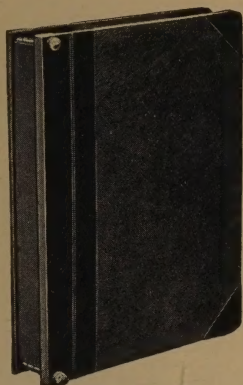


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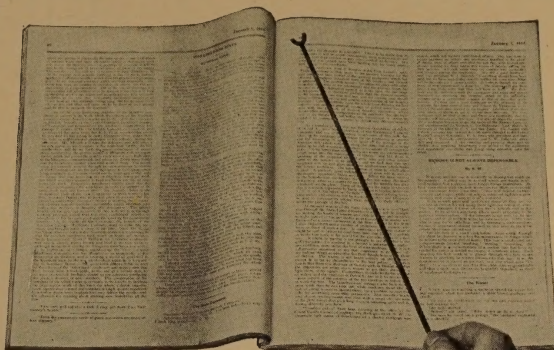
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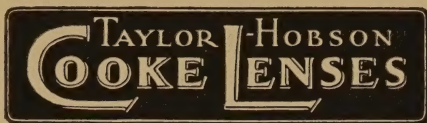
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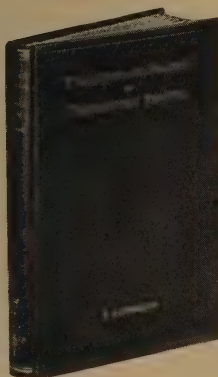
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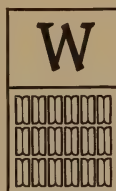
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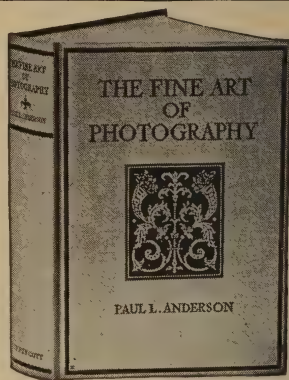
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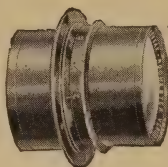
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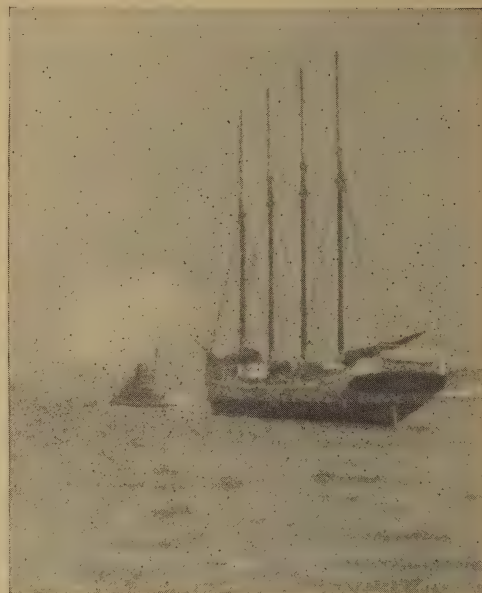
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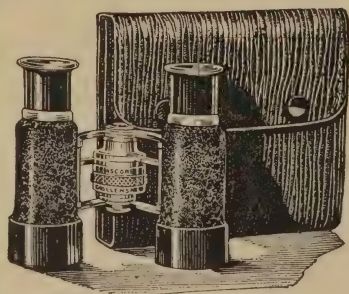
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# THE CAMERA



THE PHOTOGRAPHIC JOURNAL *of* AMERICA

FRANK V. CHAMBERS, Editor, 636 South Franklin Square, Philadelphia

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## SUMMER DAYS IN TOWN— WILLIAM S. DAVIS



WHEN summer comes, the fancies of city dwellers lightly turn to thoughts of a vacation in the country. At least that is the subject their thoughts are supposed to be fixed upon, if we are to believe the testimony of the average "man in the street" and the literature put forth by those who cater to vacationists. Two weeks—the length of most workers' vacations—do not, however, make a summer, so no matter how well the amateur photographer may utilize the time spent away from his home city, the harvest-time for picture-making in the country is necessarily much shorter than the balance of the ninety odd days that the almanac makers tell us must be counted as the summer season, to say nothing of the many good days encountered in the late spring and early autumn. Realizing this, the wise worker, who really loves to use a camera, will not pause to moan over the necessity of spending so much time at home, but, instead, will get out and find a way to derive refreshment by gaining a new outlook upon his immediate environment and such spots as are within easy reach.

The long days of early summer provide many hours of good daylight, both before and after business, which may be well spent going about, camera in hand, seeking food for the sensitive film and at the same time learning new things every day. So far as I've been able to learn, the ignorance of the average individual regarding features of interest or beauty existing within a few miles at most from his city home, is both surprising and lamentable. Answers I have received to questions upon the subject seem to indicate a very close adherence to some fixed routine, such as following daily a given route between home and office, going to the "movies" on certain evenings, and in summer perhaps an



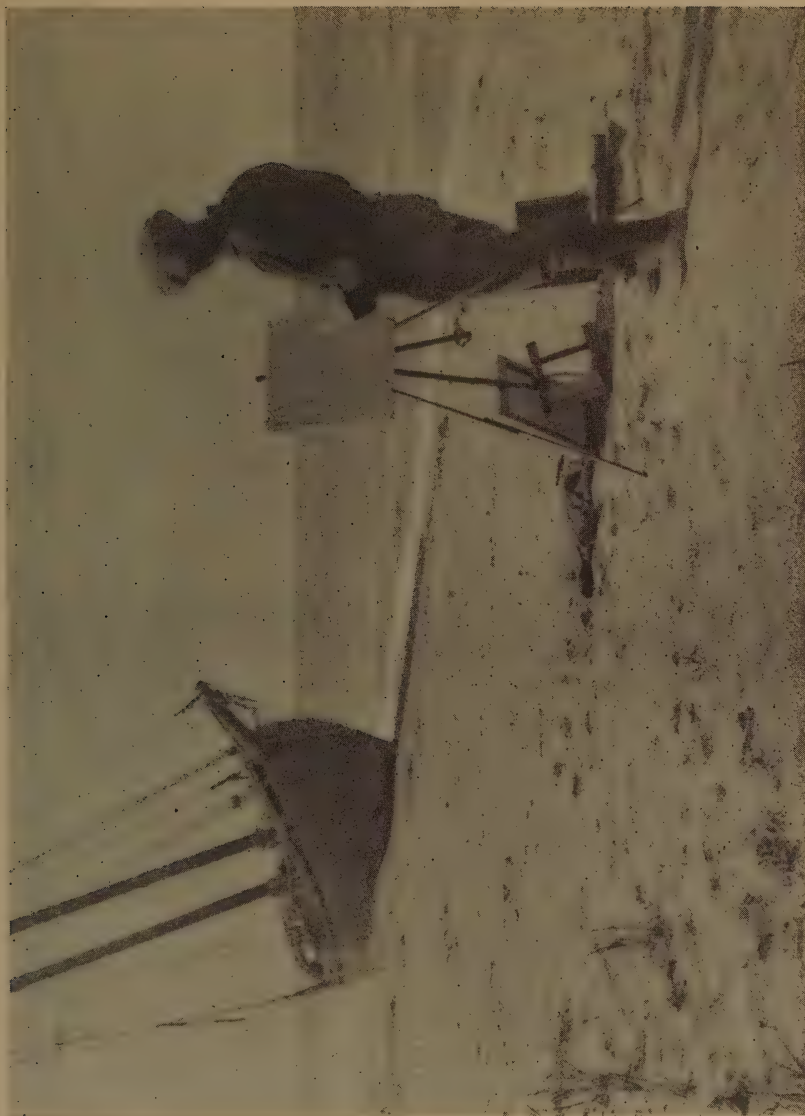
amusement park on a week-end holiday. Outside such beaten paths lies a hazy region, dotted with names known by hearsay, that has never personally been explored. One would have to hunt far, indeed, to find a person residing in any good size city who has actually ridden or walked through all its streets. For that matter, mighty few people know their own city well enough to make out a list of all the streets without consulting a city map or directory, and this applies to small cities as well as large. Do you wish to know what all this has to do with your camera work this summer? The answer is this: Until you are reasonably well acquainted with every portion of your city, as a result of personal inspection, you cannot fix a limit to the opportunities that exist for obtaining effective pictures. Admitting this, why not resolve to utilize some of the early morning hours (which, by the way, are the coolest time of the day in summer) and the period between the close of business and sunset, when the light possesses a soft mellow quality, to do some local exploration work? Choose, for instance, some definite section—not too large—take one street at a time and note its outstanding features, whether they be beautiful, historic, quaint or merely odd in character. Don't stop with giving a particular district the "once over," but revisit the spots that seem to hold the greatest possibilities



"A WASHINGTON SQUARE VISTA"

WILLIAM S. DAVIS





"THE ARTIST"

First Prize

From the Members' Exhibit at the Newark Camera Club

LOUIS F. BUCHER





"THE TUNNEL EXIT"

JOHN THOMSON

Second Prize

From the Members' Exhibit at the Newark Camera Club



until you are familiar with the light and shadow effects of both morning and afternoon, the simplification of detail and broader impression conveyed by an envelope of fog or mist, the way the buildings mass themselves against the sky as twilight comes on, the darks being accented by the twinkling lights along the streets and in the windows, and the change in aspect wrought by reflections upon a rainy day or evening.

If a systematic investigation of a locality does not appeal, you might try hunting for a particular class of subjects all over town, such as historic spots and old buildings. In American cities, at least, so many buildings are demolished and other changes wrought in the name of "progress," that one may be performing a really valuable service in gathering a collection of photographs of landmarks, a collection that is bound to increase in interest and importance with the flight of time. Another interesting line is to try to produce a series of pictures of the best known buildings as seen from novel viewpoints or under unusual conditions. One need not take to flying, risk one's neck by climbing to the top of a high flagpole, nor indulge in any other spectacular "stunt" to accomplish the desired result. Rather, study each subject from other viewpoints, and at other hours of the day or night than those favored by the professional view and postcard photographer. Such "bits" as a vista obtained by looking out from between the pillars of a portico, or at night the illuminated entrance of some public building, may strike an entirely new note in the interpretation of familiar material.

Still another source of subjects are the outdoor groups of sculpture that are connected with many memorials, fountains, etc. Practically every city



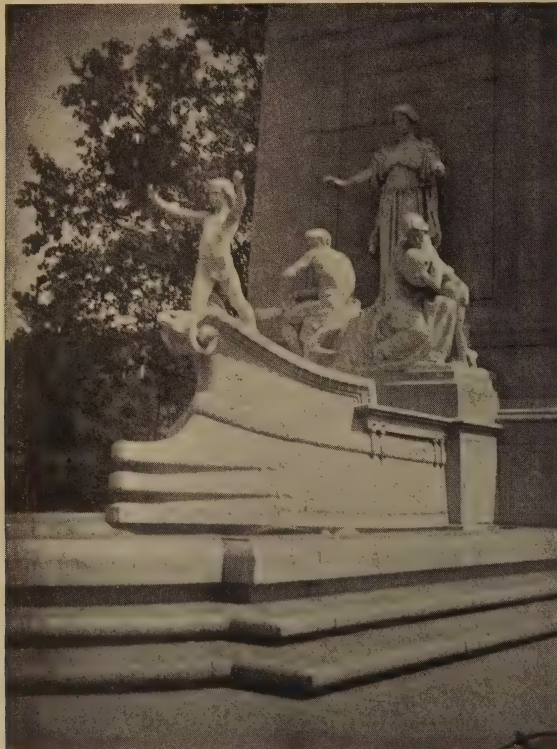
"THE FERRY SLIP"

WILLIAM S. DAVIS



possesses some worthy examples of the sculptors' art, which can be worked into unique still-life compositions. Instead of selecting a viewpoint that will simply lead to making a commonplace record of a fountain or group in its entirety, a truly original composition may usually be evolved by choosing some single feature, watching for the lighting that will produce a striking effect of light and shadow, and so dispose the masses of light and dark within the boundaries of the picture as to produce a satisfying design. Lighting plays quite as important a part as the choice of a viewpoint in determining the effect produced by a piece of sculpture. Diffused sunshine, coming from one side, is generally excellent for a straight record, but when one's intention is to employ the material as a basis for a finished pictorial ensemble, more liberties may be taken, such as utilizing the striking chiaroscuro effects so often seen in strong sunshine or artificial light, the ethereal quality imparted by thick mist and the impressive sense of solidity and mass simplicity occasioned by the silhouetting of a group against a light background.

The more important streets, filled with flowing streams of traffic, afford material for many compositions, and the quiet side streets and alleys under the right conditions may possess unsuspected beauties as the light strikes some fine old doorway or other detail that may be featured.



"DETAIL OF THE 'MAINE' MEMORIAL"

WILLIAM S. DAVIS



"TOILERS"

Third Prize  
From the Members' Exhibit at the Newark Camera Club

W. F. BROWN





"THE ABATING STORM"

First Honorable Mention  
From the Members' Exhibit at the Newark Camera Club

R. E. AZHDERIAN

If water plays an important part in the cities' setting, fresh chances are afforded for the picture-maker. Lakes, rivers and harbors each possess distinctive features in connection with the life of the cities adjacent to them, mills, warehouses, bridges, wharves and shipping being a few of the subjects one is likely to find. Much of the material—factories, for instance—may be uninteresting or even ugly of themselves, measured by conventional standards of beauty, yet yield exceedingly beautiful pictures, if the photographer but have the eye to see the subject-matter in terms of shapes and tones that can be so united as to produce an attractive play of line and group of light and dark masses. Certain of our artists have extracted beauty from such subjects as steel mills, oil refineries, train-yards, bridge building, the construction of "sky scrapers" and other forms of industrial activity. Others may do the same, providing they are able to recognize the latent possibilities.

The parks afford one more field for work within city limits. In the larger areas landscape material can be found rivaling in interest that generally existing within easy reach of a small village, and frequently of much greater pictorial value than the so-called scenery encountered in the immediate neighborhood of some fashionable summer-resorts. In the case of the smaller parks and open spaces, however, the landscape is usually artificial and formal in character, but if this fact be accepted and the material utilized without attempting to camouflage its true character, excellent compositions may often be worked out by concentrating upon distinctive "bits" here and there.

Looking at the matter broadly, it seems evident that the city worker does not lack for subjects, and these vary so much in their nature that surely the individual must be hard to please, or lacking in powers of observation, who can-



"A PARK VISTA"

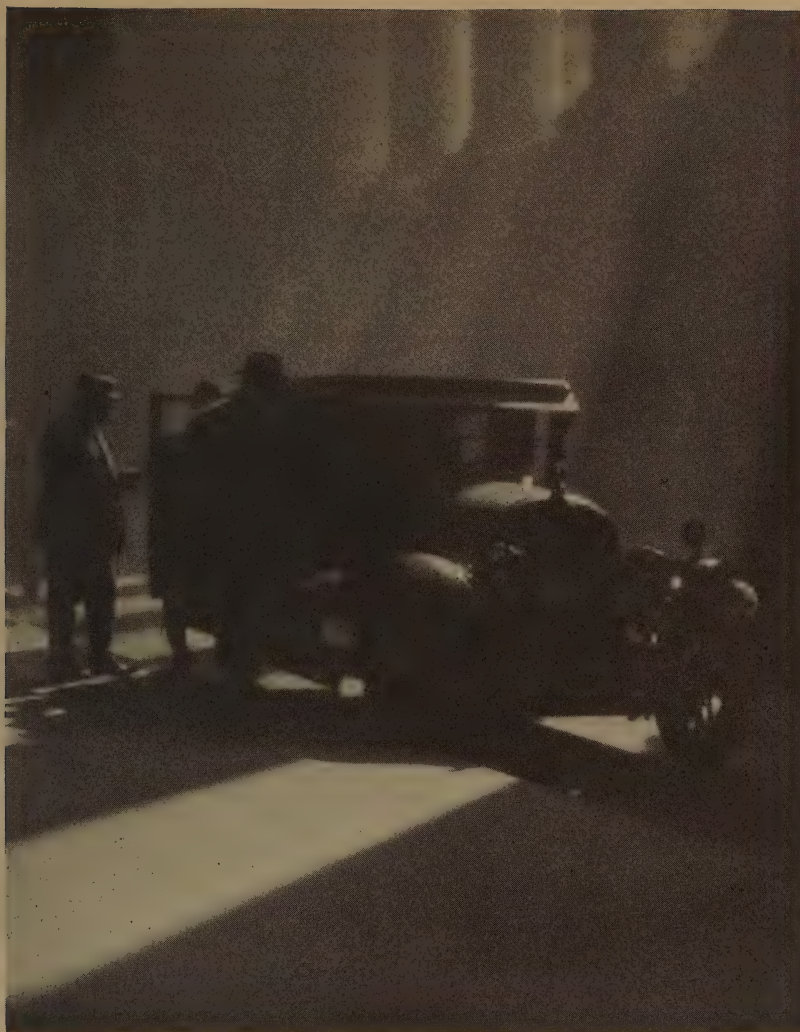
WILLIAM S. DAVIS



not find a fair number that make a personal appeal. Keeping up one's interest in the game depends upon making the use of a camera enjoyable, and on warm summer days, continued interest is partly dependent upon escaping the undue fatigue entailed in going about afoot loaded down with a heavy, bulky, outfit. For general utility, a small instrument, fitted with a reasonably good lens, whose working aperture is not less than  $f8$  is most serviceable. A  $3\frac{1}{4} \times 4\frac{1}{4}$  or  $4 \times 5$  plate camera, provided with the usual adjustments, will enable one to cope with architectural, and other subjects, that need careful technical treatment, and is really ideal to take along when going out with the deliberate intention of seeking subjects. Many good subjects, however, appear unexpectedly upon the horizon when such an outfit would not be at hand to capture them, and to meet such a situation, there is nothing equal to a good pocket instrument that can be taken anywhere without inconvenience. While a great deal of work can be done with a camera held in the hand, there are some subjects that absolutely require the placing of the camera upon a steady support, both on account of the length of exposure required and to enable the operator to use such adjustments as the swing-back and rising-front. A light steel tripod will serve the purpose. The use of a tripod in some parks and buildings is not allowed, though, without a special permit, therefore, to avoid any misunderstanding and delay, it is advisable to look the matter up and secure in advance such permits as are necessary. Apply to the Park Commissioner for permits to work in the city parks. In the case of a public building, the superintendent usually has authority to issue the permit.

Another suggestion that I would offer, as an aid to keeping up one's interest, is to avoid making an excessive number of exposures. Results are what count in the long run and obtaining a high percentage of satisfactory photographs from a smaller number of exposures made upon carefully selected subjects gives lasting pleasure, whereas the mere labor of developing (or the cost of having others do the work) puts a damper upon further work, if the results are indifferent or worse in quality. One picture a week that is really excellent in both technique and pictorial effect is a very worth-while record, and to secure as many as half-a-dozen technically good negatives in the same period, will comfortably fill one's spare time, especially if one includes the development and the printing. Because a camera is taken along for company on a walk is no reason for feeling under obligation to use it if the conditions are not just right, nor need one feel that a walk is wasted when no pictures are obtained, for in addition to getting some healthy exercise, one may pick up suggestions for compositions which can be made good use of when a real opportunity is encountered.

The illustrations here presented are selections from a number made at different times in New York during the summer season. "A Washington Square Vista" is a scene easily recognized by anyone familiar with the lower end of Fifth Avenue, showing as it does the tower of the Judson Church through the opening in the Washington Arch. The exposure was made early one morning while the street traffic was light. "The Ferry Slip" is a typical waterfront bit,



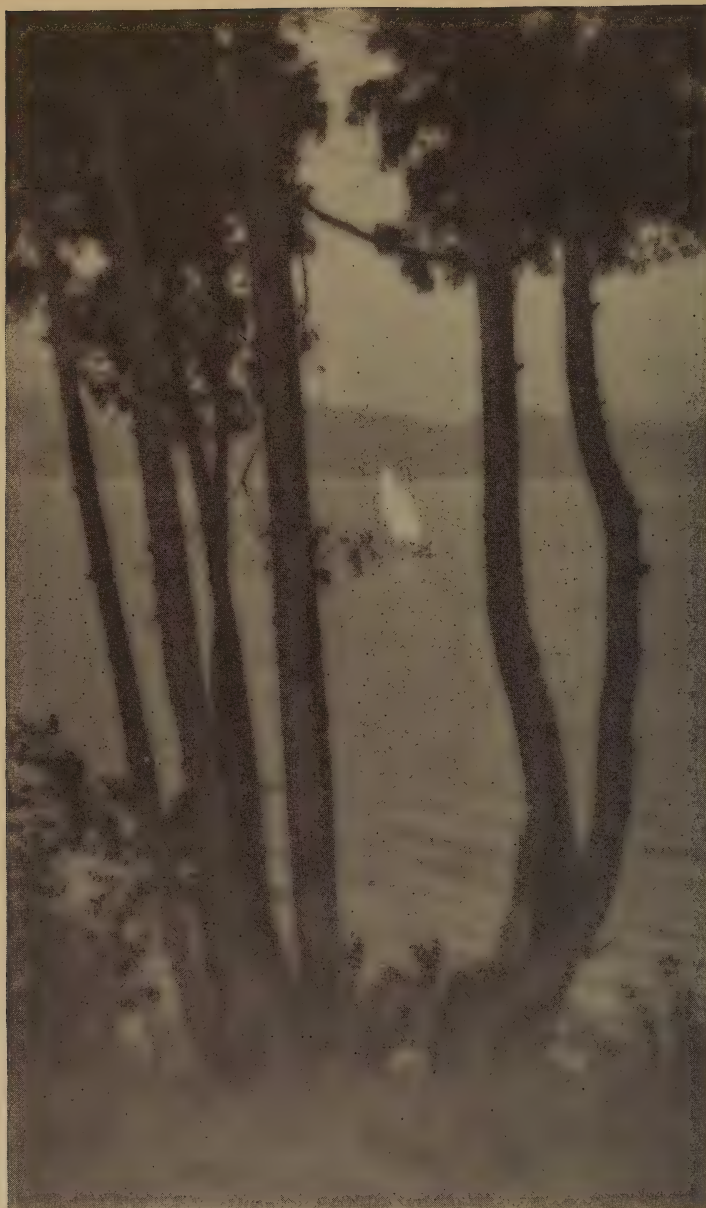
"AT THE STATION"

DR. J. B. PARDOE

Second Honorable Mention

From the Members' Exhibit at the Newark Camera Club





"THE WHITE SAIL"

Third Honorable Mention

BENJAMIN KOLBER

From the Members' Exhibit at the Newark Camera Club

made from the deck of a steamer lying at a pier adjacent to the ferry slip. "Detail of the *Maine* Memorial" features the principal symbolical group of the memorial to the victims of the battleship *Maine*, which faces Columbus Circle. This illustrates the value of the right lighting as a means of giving emphasis to certain features and in unifying the interest in the composition. The subject entitled "A Park Vista" was found in Central Park, my viewpoint being under a bridge that spans a sunken roadway. All these pictures were made with a  $3\frac{1}{4} \times 4\frac{1}{4}$  focusing plate camera, provided with swing and rising-front—features which are most valuable when one is dealing with architectural subjects with the camera mounted upon a tripod. The lens used was a 6-inch anastigmat possessing a maximum aperture of  $f6.3$ .

## CONSIDER THE FOREGROUND



PICTURE, by whatever means it may be produced, is an illusion, an endeavor on the part of the artist to deceive the eye into the belief that it sees what is a logical impossibility, the three dimensions of space on a two dimension surface, the canvas or paper on which the picture is projected. It is the trick of art to effect this legerdemain. The artist constructs planes, which vary in intensity from definiteness to indefiniteness, and so the eye is enabled to travel into the subject, as if it were a veritable extension.

These planes of the picture create the illusion by simulating natural aerial perspective. We have the foreground, the intermediate distance, and the far off distance, which "cheats the eye with air." Our present purpose is to touch upon the foremost plane which is called the foreground of the picture, because we find that of all the essentials which go to make up the illusion of space, this foreground seems, to the photographer who affects art in his camera work, to offer greater difficulty. It is that part of the picture where he is most dependent upon his own resources to bring it into relation or appropriate association with the other planes, where nature does more of the artwork for him.

If he effects, for instance, a strong picture that is one possessed of qualities which tend to action, it is generally the foreground which must be called upon to give the emphasis to the subject, the middle distance and the extreme distance can be subordinate to it. The weakness of the picture is always more apparent when the foreground is lacking in character. Hence it is an important feature, and the poor handling of it in the photograph is more apparent than it would be in a painting which falls off in its execution in the foreground.

In a painting the artist has a chance to call on more resources than is possible for the photographer. The painter can, so to say, mend his work by introducing what is additive, or excluding what is too obtrusive, or what may be incongruous to the other parts.

But then the photographer, who can control the building up of the foreground, has the advantage, for he can rely more upon the part it is to play in the scheme. The painter cannot, without exercise of consummate skill coupled



with energy, equal the sun artist in that beautiful exhibition of detail which contributes so much to the general effect.

During the summer and autumn months, and also to a considerable degree in the early spring, nature is so lavish in her charming touches, that it would be an unpardonable neglect on the part of the photographer to overlook the endowment so freely presented.

So the photographer has abundant opportunity of accentuating what he desires to bring out in his picture, by attention to the foreground, but how seldom do we see this done. The foreground is too often the poorest part of the picture and as it cannot play a neutral part, it must do harm.

Let us not be here misunderstood, when we speak about elaboration of detail in the foreground. Do not interpret us to mean that because it is so easy to secure minutiae with the lens, that we advocate intense sharpness of the detail in the foreground. On the contrary, the true artist knows when to suppress, when to emphasize detail.

We mentioned the luxuriance of summer and autumn, but we caution not to err in over-elaboration because of the gratuitous wealth. But in the winter of the year, not only are the boughs bare of their ornamental foliage, but practically there is but little haze in the atmosphere to give pleasing contrast in the aerial perspective such as prevails during the other months of the year, and when the distance comports itself so charmingly.

When the landscape is covered with snow, when all is one universal blank, how difficult it is to get those beautiful half-tone-shadows. The values in snow



"BROOK WILLOWS"

H. C. BREWSTER

From the Members' Exhibit at the Newark Camera Club



"PATIENCE HAS ITS REWARD"

T. W. NICHOLS

From the Members' Exhibit at the Newark Camera Club





"A WET DAY"

ARCHIBALD SANDS

From the Members' Exhibit at the Newark Camera Club

scenes are so essentially delicate that the differentiation of light and shade is effective only in the minor key. To be sure, this delicacy is in the glistening mounds of snow, but it is so evasive and though perceptible to the trained eye, we know how great is the falling off when we try to get the sensitive plate to record it.

It follows, therefore, that in pictures of snowy prospect the consideration of the character of the foreground is of vital importance. To those photographers who desire to make effective pictures where snow is predominant (and there are some most delightful exhibitions of winter scenery by the camera which the painter would be grateful to produce with equal beauty), we would suggest the policy of limitation of subject, to the confining of effort to little bits, to avoid too extensive a prospect, however attractive it may look to his eye, and in such little bits to pay special attention to the character of the foreground.

A foreground possessed of interest and one congruous to the subject should be his aim, as, for instance, a foreground showing a half-buried fence with a twining vine wreathed in feathery snow, a snow roofed barn, or cottage or a tree, or bush, so placed that it does not come out too pronouncedly by intensity to give undue contrast.



"A GLIMPSE THROUGH THE TREES"

B. L. SCHNECKER

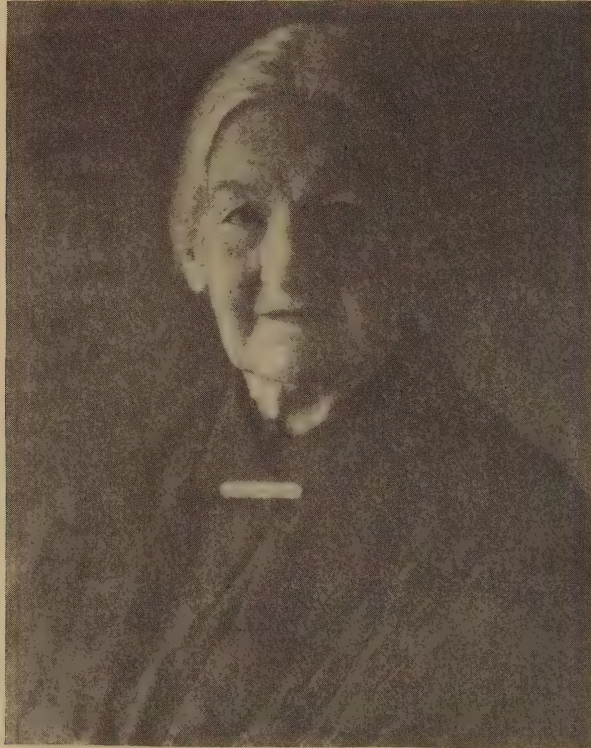
From the Members' Exhibit at the Newark Camera Club



Where there is some expanse of foreground covered with snow, the picture must show it, as swept by the wind in ruts and ridges, so that parts of it may be seen in shadow, and these shadows are often beautifully luminous, not blank and flat.

Pictorial foregrounds in nature are not particularly rife. They have to be sought for. We not infrequently come upon a scene having all the qualifications of the picturesque, but lacking in effective foreground. But even in such cases, there is an art that does amend Nature, and Nature may be made to furnish the means. The photographer of taste is often able to supplement the deficiency by improvising a background.

Frequently, the mere introduction of a figure or figures gives just the added touch which transforms all into a thing of beauty, but exercise taste and judgment when you are called thus to aid Nature. These human accessories must be introduced with an eye single to their fitness, and must be studied to be in accord with the lines of the general composition. They must have the effect of spontaneity, must not suggest lay figures, and the same caution is urged when rocks or brush, or any other natural accessory is called to service. It must look natural.



"GRANDMA"

P. J. SCHWEICKART

From the Members' Exhibit at the Newark Camera Club

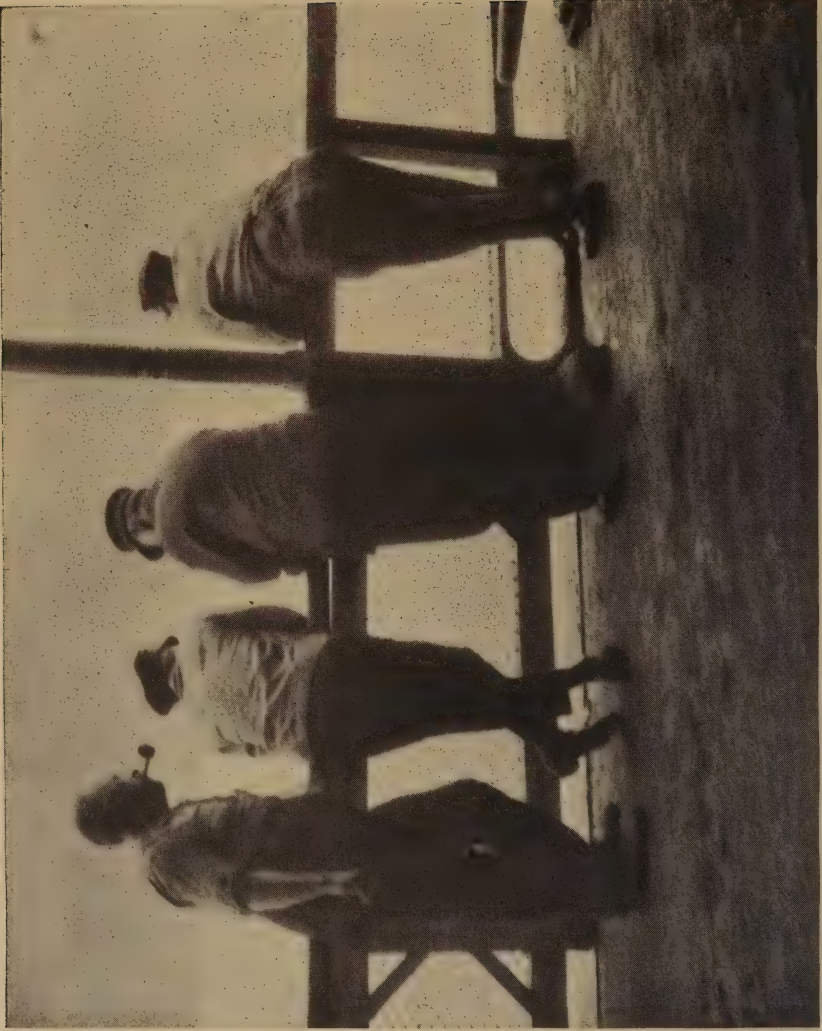


"MISTY MORNING"

From the Members' Exhibit at the Newark Camera Club

EDWARD BROWASKI





"LEISURE MOMENTS"

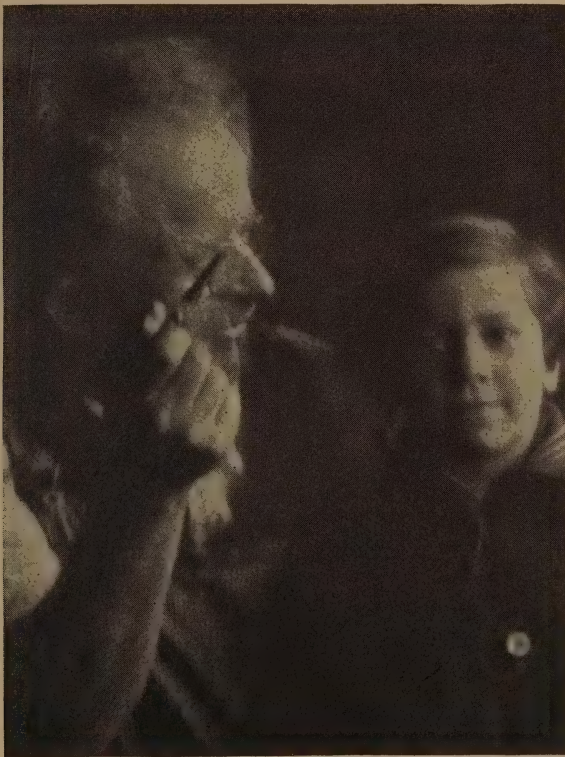
From the Members' Exhibit at the Newark Camera Club

W. L. WOODBURN

Blank foregrounds are sometimes made most effective by projection of long shadows, as when the view is taken against the light early in the morning or late in the afternoon. Here nature does her own amendment and the effect is always pleasing. In considering foregrounds, the student should study the general principles controlling art composition, bearing always in mind that the simpler the theme and the broader the effect, the more likely will the relation between foreground and distance be preserved.

Study the works by well known painters—Lawrence, Constable, Bounat, Pelouse, Troyon, Corot, Daubigny—and see how very simple their pictures are painted, and yet, how full they are of detail and interest, and how lovely are the foregrounds. There is always some central interest to which everything is subservient, yet there is nothing forced, all looks natural.

Do not photograph everything which looks pleasing to your eye, but have selective ability. Take the picture only when you have found something which you know will give you pleasure when you see it in the print—not be a constant source of regret, because it lacks just something essential to make it a picture. To succeed, it is necessary to study much, and to study intently.



"GRAND-DAD AND HIS PAL"

L. P. DUDLEY

From the Members' Exhibit at the Newark Camera Club



## COLOR EFFECT IN THE PICTURE



HOTOGRAPHY, as an artistic means of reproduction in monochrome, ranks equally with any of the other methods of monochrome pictorial expression. The discovery of color sensitive photography—that is, the true rendition of color intensities of Nature—made possible the registration of values, the performance of which had been impossible by the old photography. Nevertheless, the want of actual color in the photograph is a block to advance to higher phases of pigment work as exhibited by the painter.

This limitation must be acknowledged as a serious impediment to further progress, not only because of the more extended outlook color gives to the artist in representation of Nature in her glorious endowment, but also because color, aside from the intrinsic beauty it confers upon objects and forms, modifies outlines and blends and softens the presentation of objects whereby they appeal better to the imagination than when divorced from the magic of color.

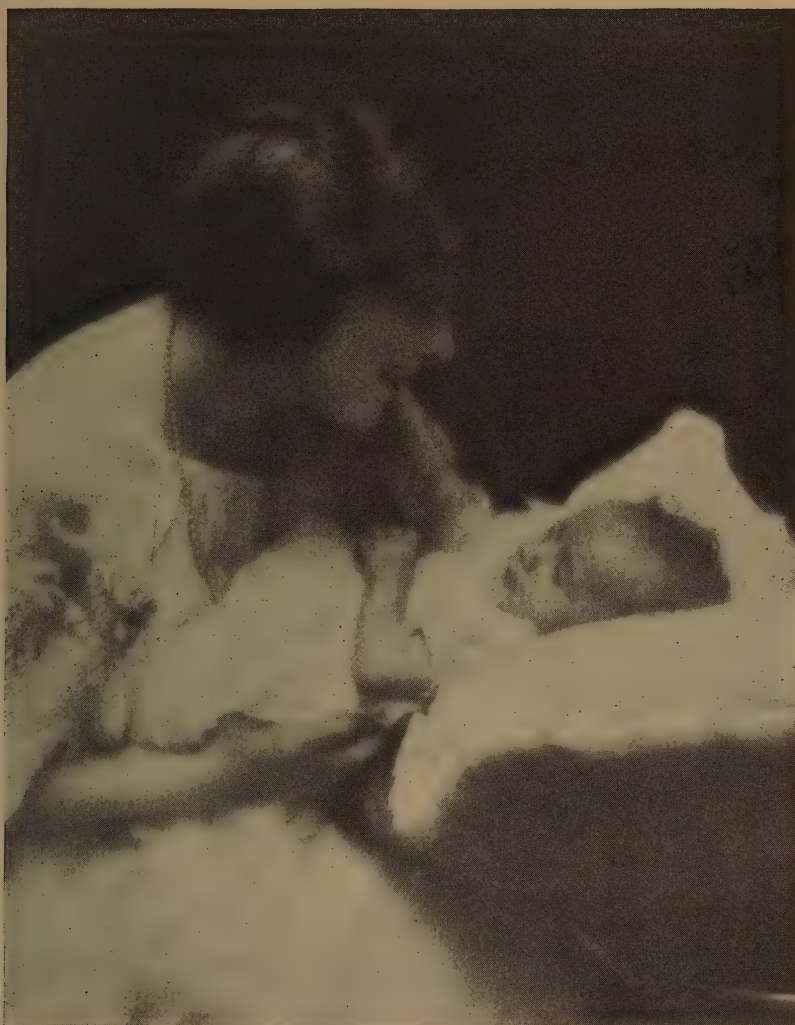
Monochrome art, by its very imperfection in graphic power to convey the true semblance of form and significance of things, calls to the imagination to amend its shortcomings, and hence has a greater appeal to the æsthetic sense than the definiteness and completeness of the photograph's record. And it may be just for this absolute reproduction of the truth, which leaves so little to be supplied subjectively, which has inspired the efforts of the impressionist and diffusionist in photography to blur form by indefiniteness of presentation and to obliterate the structural quality of things, in the despair at being denied the prerogative of the painter with pigment to present verity with appeal, at the same time, to the imagination.

If ever true direct color-photography shall become an accomplished fact, impressionism and all other subterfuges of photographic art, to give Nature in all her beauty, will be things of the past.

Photography has mastered the graphic presentation of Nature; the pencil of light is more faithful than the pencil of the most skilful draughtsman, and when photography has overcome the inability to register color, what wonders may we not anticipate! Monochrome photography has exerted salutary influence on painter's art by its revelation of the beauty of form. It has taught the painter how to present foliage, mountain scenery, distance and atmospheric perspective, and revealed phenomena of Nature unsuspected to his visual limitation, but what new impulse may not color-photography give to art when its apocalypse takes place?

This is not over-sanguine expectation, for the efforts to reproduce color directly by photography are gaining more and more ground, and there is well-founded hope that ere long the problem will be solved and actual color-photography be a thing of practical accomplishment.

We are not ignoring the ingenious methods for indirect production of color by photography, but are doubtful of the claim made that indirect color

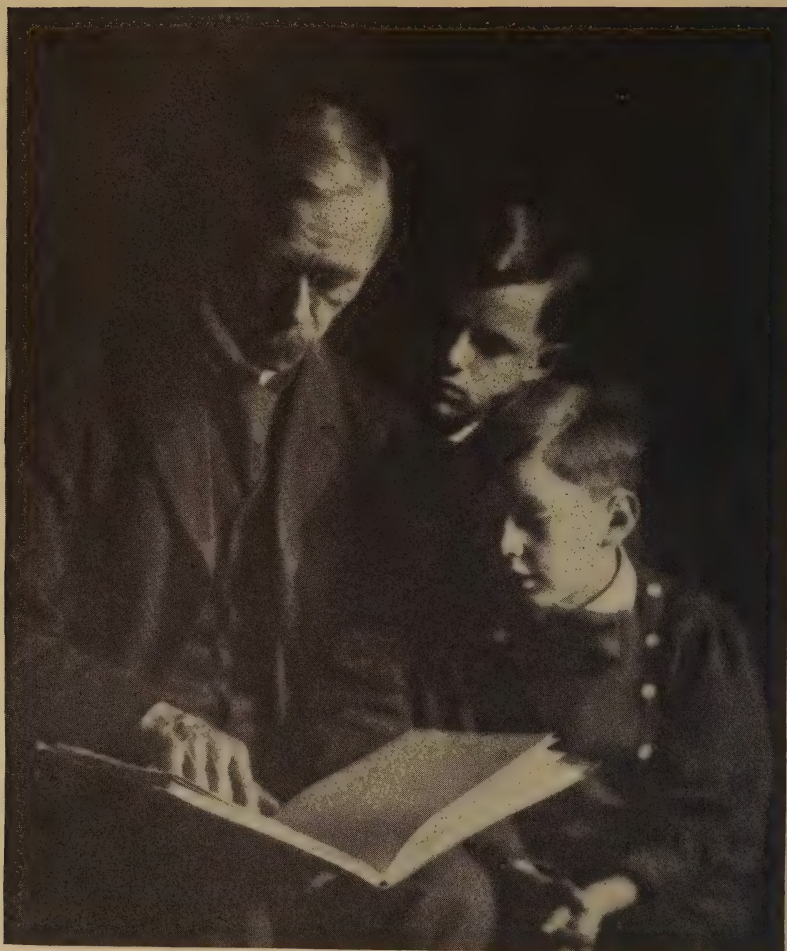


"MOTHER'S LOVE"

G. A. LUCADAM

From the Members' Exhibit at the Newark Camera Club





"PORTRAIT"

HENRY HALL

From the Members' Exhibit at the Newark Camera Club

presentation is the only possible means. In fact, we might say it is not a solution of the problem, and further we have reason to expect some new direction in experimentation not forced to take the conventional grooves, which will lead to discoveries unsuspected.

The possibility of direct color-photography has been demonstrated; only it has not been made so far a practical thing.

The experimenter in the line of direct photography should go about his investigation inductively, and not, as too many do, deductively, relying too much on the inspiration of the moment in the hope of some lucky accident. Of course, discoveries, great discoveries, have been products almost of pure subjectivity; witness Kepler's imaginative guesses which turned out truths, and if we believe the tradition, the daguerreotype was an accident; but induction had its innings. It was by process of elimination that the real agent of development of the latent image was discovered.

One thing we must take into consideration, the discovery is never revealed to an inspired idiot. It is invariably endowed on the one who has concentrated his thought upon the subject, and even though the realization flash upon his subconsciousness, his inward eye, it must be ascribed to co-ordination of knowledge of facts attained by earnest investigation relative thereto.



"THE PATH IN THE WOODS"

GEORGE WINNETT, JR.

From the Members' Exhibit at the Newark Camera Club



The discoverer, therefore, must draw on his resources to incite to activity his imagination. He must have a stock of facts, or his vision can never materialize.

#### PECULIARITIES OF COLORS

##### 1. Red (purple red and spectrum red).

Purple red, the color intermediate between spectrum red and violet, is not present in the solar spectrum, but a much employed pigment of the painter.

Cinnabar is a red corresponding to the red of the spectrum, but it is not used in painting, because its initial color is relegated to brown by the vehicle employed in making it a pigment.

Coal tar colors are used, among which the purple colors play the principal part.

Of all the colors, spectrum red suffers the least change by increasing intensity of light.

Blue and violet suffer the most, and the other colors proportionally, approaching towards white.

Yellow is in the same category, but red is least affected, having at times only a slight yellowish tint.

In fireworks displays, the red light is always the most intense in color. In the starry vault, red stars are the most prominent, though not the most brilliant. Aldebaran is more noticed even than Sirius. The image of the red setting sun, projected by a lens system upon a white screen, is always red.

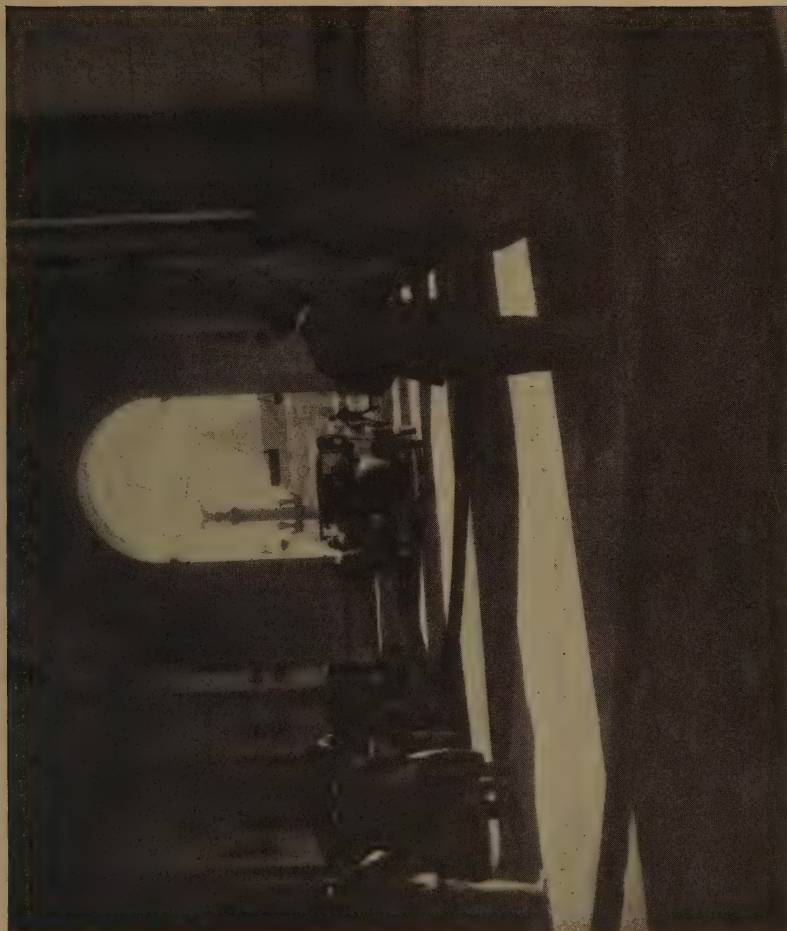
When the astronomer uses dark glass, on the eye-piece of the telescope, to look at the disc of the sun, very dark glasses, with the exception of dark red, give whitish images.



"DOWN IN MAINE".

DR. A. R. BENEDICT

From the Members' Exhibit at the Newark Camera Club



"BUSY PORTERS"

From the Members' Exhibit at the Newark Camera Club

W. J. MOSHER, JR.



Blue is the last color distinguished at night, and all pure whites look blue, when intensity is small.

This is why moonlight looks bluish, although there is much reflected red light from the moon's surface. The incandescent electric arc is bluish at some distance, but we know that it is white light.

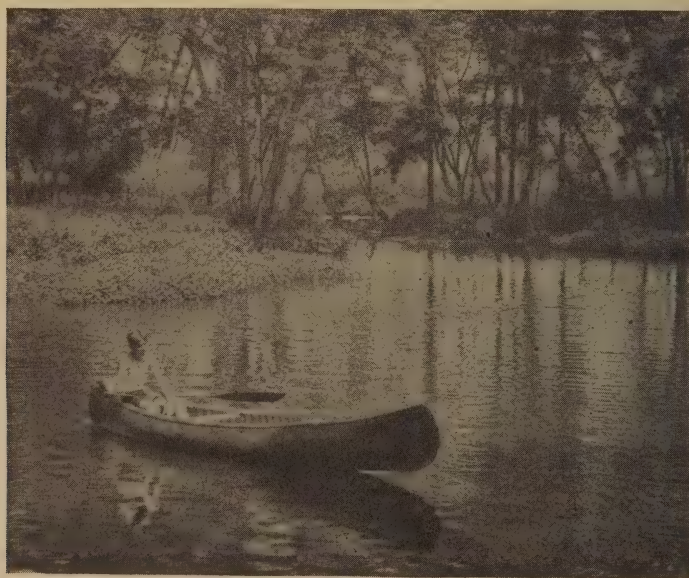
It is apparent, therefore, that the same white light (sunlight we call white light) appears to our vision of different color, according to its intensity, and that its appearance changes with increase of light power from a bluish tone to the complementary yellow tone.

The human eye, therefore, is only able to compare the brightness of different colors when at medium intensities.

With intense brightness, blue invariably looks darker than red, with diminished intensity it looks lighter.

It might appear from this that it is very difficult to harmonize complementary colors; that, at uniform increase or decrease of intensity, they should be supplementary to white, but it is not so, for the reason that, when bright yellow, for instance, appears relatively brighter than the complementary blue previously harmonized with it, the resulting white must look yellowish so as to give visual impression of greater brightness, while, contrariwise, depending upon the character of the component color at lower intensity, it appears bluish.

Let us return to the effect of the red in the painted picture. We find that everywhere, where it makes a saturated and brilliant impression, it must remain red, or allowably pass a little towards orange, but that it never should become whitish.



"SUMMER PLEASURES"

W. E. COMPTON

From the Members' Exhibit at the Newark Camera Club

The same holds true of purple red, which when very intense approximates vermilion, because the blue component in it looks whitish.

At decreasing intensity, however, red passes quickly through reddish brown to deep black.

Pure red, on large area, makes a painting too violent in color, yet we have seen a head painted with a red background, but with disaster to flesh tones. Red has therefore to be applied with moderation in painting.

Orange. Although orange may be as simple a color as red or yellow, it gives the impression of a compound color, a mixture of red and yellow, the same as violet seems a mixture of blue and purple.

Purple, red, yellow and blue, in water colors, yield by mixture all the other pure colors, as orange, green and violet, with intermediate tones, but it is impossible to get the same result from mixture of orange, green and violet.

Orange and green do not give pure yellow, but a yellow brown. Green and violet do not form blue, but neutral tint. Violet and orange do not give red, but a dull red brown.

Our optical knowledge furnishes us with no explanation of the phenomena of these mixtures. It would seem possible for the experimenter to filter out by subtractive means all disturbing colors to get the desired color. Color theories cannot help us here, because the effect is not due to subjective cause, physiological visual action, but to pure physical cause. This must be acknowledged, as long as we depend for the explanation of color sensation upon the claim of formation of the so-called secondary colors from mixture of the primary colors.



"THE PLOWMAN"

J. V. H. VAN REYPER

From the Members' Exhibit at the Newark Camera Club



Yellow, of all the colors, suggests brilliancy the most decidedly. A view of a dull, clouded landscape through a yellow glass give the impression of sunshine.

Yellow is the most frequent color in a landscape next to the blue sky and green foliage. In tropical countries we might say it is the most predominant color of landscape, vying with the sky for supremacy. Yellow, we are told, is not a primary color, being formed by overlapping of the red and green of the spectrum, but why is it that if one blinds one's eyes by temporarily gazing at a bright sodium flame (pure yellow) through the spectroscope, the red and green run into each other without a trace of yellow? This would tend to show that, as far as our vision is concerned, yellow is a distinct color and not a mixture of red and green, as the color theories claim.

Green. Spectrum green finds no complementary color in the spectrum, being, with purple, complementary to white. Green is on the border between light colors and shade colors. This is why it is agreeable to our vision. A pure green in Nature is rare, appearing only here and there between more broken tones. The green of water color painting is a mixture of yellow and blue.

Yellow-green is a light color; blue-green a shadow color.

Yellow-green is found in high-light foliage and sunlit grass, while the shadows of foliage and of the meadow are bluish.

Blue and violet are both shadow colors and also light colors, but the violet is sometimes contrasted in the landscape with blue.

It is unnecessary to speak of broken colors further than to say they comport themselves similarly to full colors, but when placed side by side, or



"OCTOBER"

C. A. KNAPP

From the Members' Exhibit at the Newark Camera Club

close together, the contrasts, strange to say, are more pronounced than with full colors under like condition. The pure colors in a painting, to be sure, appear as the most brilliant parts, but they blend by intermediate tones into each other, and the broken tones are not directly apparent, but nevertheless have strong effect.

It is generally admitted that the discovery of Daguerre, by the revelation it made of the beauty of reality and the significance of the actual, redeemed art from the inanimity it was about to sink into; so may we not hope for the like from the inanity it was about to sink into; so may we not hope for the like salvation of the art of today, submerged as it is in the riotous psychopathic flood of abnormality, if the accomplishment of a true reproduction by "direct photography" of Nature's colors were possible.

By direct process, we say, because the methods pursued by the exponents of indirect color reproduction are not instructive in any way to the painter in directing attention to the character of Nature's coloration.

## LITTLE AND BETTER—C. H. CLAUDY



An amateur photographer said to me: "I was introduced to a young man yesterday who showed me the most marvelous collection of photographs I have ever seen. Landscapes, seascapes, interiors, portraits, flowers, animals, babies; there was apparently no limit to either his versatility and his skill. I asked him how long he had been making pictures and he told me three years. Then I wanted to see his outfits. Of course I expected to be shown a battery of lenses, half a dozen cameras, a huge work room with every modern convenience, all sorts of electric printing machines and lamps; what I saw was a vest pocket Kodak, an enlarging apparatus, three trays and half a dozen bottles, a tank and a work bench.

"I didn't believe it at first, but he finally convinced me it was all true. Every one of those beautiful pictures was originally a vest pocket Kodak negative on film, developed in a tank and printed with an enlarging apparatus. What I want you to do is to tell me why, if such beautiful things can be made with such simple apparatus, how I can do it, and why any one ever uses a big camera or buys hundreds of dollars worth of apparatus?"

I answered my inquirer as well as I could, and then, at his suggestion, I wrote down what I had said for the benefit of others who may like to know for themselves the simple "secret" of such success. This is what I said.

The reason your young friend can make such beautiful pictures, with so simple an outfit, must be two in number. First, he thoroughly knows and understands the capacity of his outfit, what it will and what it won't do, and doesn't attempt those things with it which would spell failure at the outset; second, he has made a faithful study of the art-side of photography, so that his pictures may make up in quality what they lack in size, and so that he can make the imperfections of the enlarging process work with, and not against, his pictorial conceptions.



The vest pocket Kodak is a tiny instrument of fixed focus and not very fast shutter speed. Its lens is faster than the usual fixed focus camera, but not nearly so fast as other lenses may be. To some extent, it makes up for lack of speed by smallness of image; that is, he can make a snapshot of a moving train closer to, and more nearly at right angles, than can a brother photographer using a larger instrument and longer focus lens.

The vest pocket Kodak makes pictures which, to all intents and purposes, are sharp all over. In the following enlarging process, therefore, the operator does not have to "baby" an already soft background or out of focus foreground. He can adjust his focus, and, if he wishes, curve his paper with reference to the picture he is making, rather than with reference to the negative he is using.

Your friend has undoubtedly devoted much time to a thorough understanding of the enlarging process. It is not a complicated process, but things enter into the printing of an enlargement which do not come up in straight printing. It is, for instance, possible to "dodge" in making an enlargement in an open room by the interposition of a moving piece of cardboard, or even the fingers between the lens and the paper, where such manipulations are difficult to the point of impossibility when doing direct-in-the-frame printing.

The photographer who makes his negatives on vest pocket film and then enlarges them automatically, removes the limitations of size. He can include as much or as little as he will in the resulting enlargement. The photographer who uses a 4 x 5 or 5 x 7 instrument can, it is true, trim his pictures as much as he will, but how many of them will? Not many! A very small picture is seldom impressive. Your friend chooses exactly what he wants in his negative and enlarges that to the size he wants. You give credit to the Kodak or the enlarging process, when you should credit the judgment of the operator in omitting what is non-essential and including only that which is beautiful.

It is just as easy to make a good portrait with a small instrument as a large one, if the circumstances are right. The vest pocket Kodak, excellent instrument though it is, could hardly replace the large camera of the professional, or the portrait outfit of the amateur for all kinds of portrait work. But for informal portraits outdoors, it is as good as any other pocket instrument, and its very smallness and ease of manipulation make it possible to use without the sitter's knowledge, in itself a means for making excellent likenesses.

Doubtless he showed you some interiors. Except for its narrow angle of view, compared to a wide-angle-lens-equipped instrument, I can see no reason why the vest pocket Kodak shouldn't make as clear, distinct and excellent an interior as any other camera. I have known instances of men getting outside a room and pointing the instrument through a window, to get more length to the picture, thus in part compensating for the narrow angle of the lens. Making interiors, after all, is so much a matter of light and shade, of arrangement of furniture, of evenness of illumination, of composition and finally of correct timing, and so little a matter of instrument, that I can find nothing incongruous in a man making beautiful pictures of rooms and balconies and churches, inside, with a small camera.

As for animals and babies, I can think of no better instrument, unless it is a Graflex, which of course is much larger, more expensive and heavier. The requirements of baby and animal pictures are absence of distraction, by the operator, ease of use of the instrument, mobility and quickness. All these the pocket Kodak has. It hasn't speed, such as a Graflex has, but unless an animal is at a gallop, one doesn't need speed to picture it. Cats, dogs, monkeys, lions in the zoo, horses, cows, sheep—none of these need move fast.

If your friend makes good pictures of animals with his vest pocket instrument, it is probably neither because of it nor in spite of it, but because he knows and understands what makes a good picture in which an animal appears. If he makes pretty baby pictures, it is because he understands babies. His instrument is merely the means of translation of what he sees to the paper. The mechanism of that means, whether it be portrait lens and large plate or small lens and instrument and enlarging apparatus, is far less important than what he sees and how he sees it.

In other words, your friend is an artist and would make fine pictures with a cigar box and pin hole.

Do not misunderstand me as saying that one must be an artist to make good pictures with a vest pocket Kodak. On the contrary, the little fixed focus



"THE PRETTY FLOWER"

H. V. SCHIEREN

From the Members' Exhibit at the Newark Camera Club



instruments are as nearly fool proof as cameras can be made and require less photographic knowledge than many another camera. The most inexpert hands can make good photographs with such an instrument, but it is far cry from merely good photographs to good pictures.

My advice to my inquirer as to how he could go and do likewise included instructions to spend a month making pictures with the pocket instrument, to get a thorough familiarity with its photographic possibilities. The little pocket Kodak has a rather limited range of speeds, of shutter, and it is necessary to know what each will do on moving objects of various kinds and speed, at various distances. Once familiar with these, it is time to begin to use it for pictorial work; to try to do pictorial stuff without a complete familiarity with the photographic possibilities is nonsense.

I next advised a lengthy series of experiments with two or three negatives only, and the enlarging outfit. I would make enlargements of all possible sizes from those negatives, striving merely for technical excellence. I would experiment with those various sizes with different stops in the enlarging lens, different strengths of light, and different surfaces and kinds of paper. To attempt pictorial work by enlarging without knowing enlarging thoroughly is as absurd



"MYSELF"

FRANK P. BOND

From the Members' Exhibit at the Newark Camera Club

as to attempt pictorial negatives without knowing the vest pocket Kodak thoroughly.

My inquirer retorted that all this would take time, to which I answered that his friend had been making pictures for three years and he ought not to object to a few months' preparation.

Finally, I suggest daily visits to an art gallery and much reading of books on art principles. To become an artist, one must study art, and brush and pigment, and the mechanism of laying on paint. To become an artist with any given set of photographic tools, one must still know the art, even if one is to substitute vest pocket Kodak and enlarging camera for brush and easel.

And finally, I advised against attempting too much at once. He will be well repaid who takes landscapes or seascape, portraits of animals, interiors or exteriors, for his first summer's work and sticks faithfully to the one classification, rather than scattering effort and thus minimizing knowledge and experience by attempting to learn it all at once!

## GETTING ACQUAINTED WITH WILD FLOWERS—CHAS. A. HARRIS



ONE'S estimate of the values in life is determined largely by one's attitude or point of view. It depends upon how much of ourselves is woven into the fabric. As a consequence we pass with a glance the showing of the florist, which is often very beautiful, and may rank high in value, but in this we have played no part. On the other hand, we find that little journeys to the favorite homes of wild plants and flowers are replete with an interest, novelty and educational value that is quite personal. So far as these flowers are concerned we have discovered them and it is easy to establish a mutual friendliness. There is perhaps no nature study that can yield the same pleasure with so little outlay as the study of wild flowers. When one is interested in them, every walk into the fields is transformed from an aimless ramble into an eager quest. It makes one curious—we want to know about them and taken up in connection with the camera, it is far from the dry science that botany used to be considered.

As the flora of the Pacific Slope west of the Rocky Mountains includes many species and varieties that are essentially different from those of the section easterly, it is proposed to picture a few of the well-known flowers that are peculiarly Californian and invite further investigation, for there are many more, of course, equally important and interesting. With this in mind only, the English names are given together with the color of the particular sample shown, so that one can visualize just how they appear. Some few flowers, of course, are limited to a single color while others, like the Mariposa Tulip, are to be found in a wide range of color. Perhaps the novice might say, well, that looks good to me, but how does one go about it and one purpose of a photographic magazine is to serve, as a sort of clearing-house, for ideas along these lines—a plan with sufficient details so that a worker can adapt it to his own requirements.



The first thing necessary with flower photography is to stock up with a good reserve supply of patience, for like other life models, they should be handled in a sympathetic manner. Flowers lend themselves delightfully to the expression of sentiment. They may be photographed to convey some impression or ideal, to tell a story, or to embody a mood, etc., without any reference to detail, or they may be reproduced with a purpose of showing some graceful arrangement of a very few blooms, in sharp definition and lighted to bring out the delicate texture. This last is naturally the way if the exact structure and detail of the complete flower are to be obtained.

I have arranged all sorts of traps to catch these mice, but their practical value was limited to certain particular subjects. The vertical method, all things considered, is perhaps of greatest general utility for this purpose, especially if the program is comprehensive and includes many varieties of flowers. Arranged on a horizontal surface, it is easy to get the more perfect side of the bloom facing the lens and the whole thing to "stay put" in a given arrangement. Again one can add extra leaves or stems when required, which helps wonderfully at times. Some of the examples in the illustrations are composed of several pieces from as many separate plants, the best of each being selected. For instance, in Prickly Phlox, the group of buds is from a separate plant, but looks natural and the effect is good. The spray of wild Lilac is representative, but improved by substituting good blooms for scanty ones. Usually it is well to include unopened buds when possible. The flower group when located in one plane will photograph with equal definition throughout, which might be criticised, but for literal reproduction, such as botanists prefer, it is unobjectionable. As the blooms, stems and leaves are all necessary for identifying a flower this is one good reason



PAMPAS PLUMS—WHITE



1. Wild Hollyhock—pale pink
2. Shooting Stars—purple blue
3. California Poppies—cream color
4. Wild Morning Glory and Wild Oats—white, with pink bands outside

5. Seed Plumes of Clematis—greenish white
6. California Wild Lilac—light blue
7. Encelia—yellow, purple, brown centers
8. Prickly Phlox—rose pink

9. Mariposa Tulip—pale lilac
10. Indian Pink—scarlet
11. Brodiaea—deep violet
12. Larkspur—Mazarin blue and purple blue



why the arrangement of a flower study should always be simple, avoiding the massed effect of a bouquet. Generally one, three or five blooms produce the best effect, the last for very small flowers.

Some use filters, others claim they are unnecessary, but I have found some advantage in bringing out the greens of the foliage by holding back the light colored blooms. Difficulty with colors will also be lessened if the flowers of each study are of one color. It will be found useful in the way of systematic work if one stop is used consistently as far as possible. By keeping a complete exposure record, comparisons are then easily made and the exposure question simplified. Although a little foreign to our subject, a method that can be recommended is the use of a yellow stain for intensifying weak spots in the negative. The results are sometimes surprisingly effective and sections of the negative having detail but which print out quite black are modified so as to print correctly. I use Eastman's transparent water color, deep yellow. This can be used as necessary in varying depths of color, by adding more or less water, up to about medium yellow. If the color is too deep, it has a tendency to block the details. It is applied with a No. 1 sable brush, and after a little practice even very small objects can be successfully treated, care being taken to keep well



LUPINE—BLUE AND WHITE.

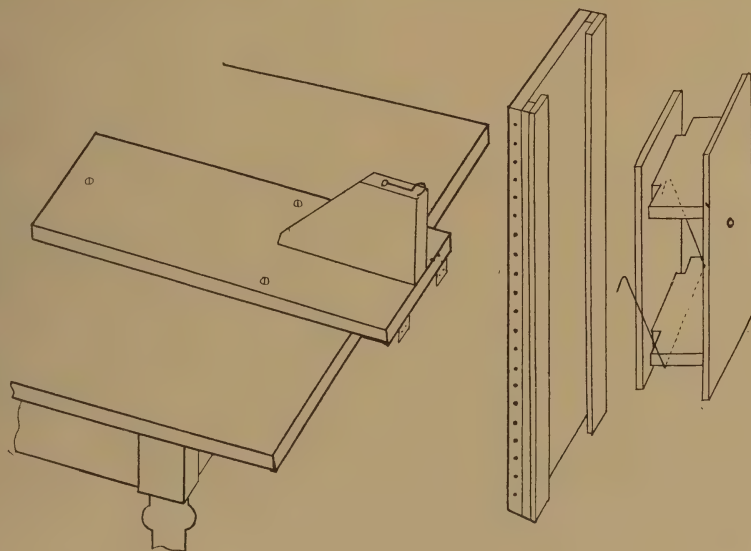
A MEMBER OF THE PEA FAMILY

within the outlines as the color spreads a trifle in the film. If results are not satisfactory the stain is entirely removed by washing the plate.

To return now to the suggested method for vertical work. It is a well-known procedure among commercial photographers who do catalogue work. I once saw an arrangement where the camera was suspended in an upright position from the ceiling and the objects to be photographed laid upon a table-top beneath. The sketch shows a simplified adaptation, which has proved serviceable and satisfactory for a variety of work and is very easy to construct. The boards are both eight inches wide, the lengths being: upright twenty-two inches, horizontal eighteen inches. This last is screwed to the table-top when in use, after which the contrivance may be folded compactly and stowed out of the way. If not desirable to mar the table, weights may be placed upon the horizontal board which will serve the purpose. The two boards are hinged at about the center of the upright and the fastening consists, as shown, in simply turning the flat hook into a screw-eye on the vertical board, the block being nailed securely to the horizontal. Nails are driven part way into both sides of the upright board with a separation of one inch, and the hooked ends of the wire engage these nails holding the platform and camera securely at any point. This wire fastening is attached to the lower block of the platform with two staples permitting free movement. The hooked ends of the wire being central with the length of the platform, the range of movement is practically the length of the vertical board, as the platform may project somewhat at either end of the slide.

For the flower work, the objection to laying them directly upon the background is that the grain or texture of the latter would photograph and be too much in evidence, producing a pasted on effect. Sometimes flowers are pinned to a background in order to secure a fixed arrangement, but we shall find this unnecessary.

The background, a suitably tinted sheet of cardboard or blotting paper that





will photograph a pleasing contrast with the particular flower, is first laid upon the floor under the camera. About twelve to sixteen inches above this is suspended a sheet of glass—one 16 x 20 inches will prove adequate, which must be spotlessly clean. A double cord is arranged to surround the edges of the glass. Links are formed for each corner by making two knots in the double cord an inch or so apart and the corners of the glass inserted in these. When the ends of the cord are brought together and tied this serves for suspending the glass. The four suspending cords are then tied to the corner links, two of them being fastened to the frame of the window and the other two tied behind the vertical board. This supports the glass without casting shadows upon the background or causing reflections. Reflections from the glass will be troublesome unless due precautions are taken. Things will reflect just as they do in the still waters of a mountain lake. The flowers must be placed as closely in contact with the glass as possible, for if much space intervenes, a reflected image will be in evidence on the negative, although it may not be noticed on the ground-glass. To overcome these difficulties, take a piece of corrugated cardboard the size of the glass, and cut a circular opening just large enough for the operation of the lens. To get this centered over the glass it may be necessary to cut and fit the inner side, this depending on the camera used. I arrange the glass horizontally with the table so as to get a side lighting on the flowers from the window. The cardboard is then covered on one side with a black cloth which can be turned over the edges all around and pasted or sewed. When this is secured in place directly under the camera by means of cords there should be no trouble with reflections from above. Care should also be taken that side reflections of light from the window do not come within range, this being determined by examining the ground-glass.

Another form of reflector, more to the purpose, consists of a large sheet of white cardboard placed vertically behind the glass and background for the purpose of lighting the shadow side and equalizing contrasts.

In connection with backgrounds we might have added that two or three shades of grey cardboard are the tints most generally useful. A good brown and a black may be included and velvet makes an excellent background both for black and grey effects. The proper use of backgrounds deserves more attention than is usually accorded. Preferably the background in the print should "tone in" with the flowers, that is, be just a little darker or lighter rather than extreme contrasts. There should be no wrinkles or creases in evidence. The resulting tone of a given background is influenced by exposure as well as by its color and if the flower demands a long exposure a relatively darker background should be used than for one requiring a short exposure. A brown background, for instance, will produce different tones from dark to light simply by varying the exposure. A little practice is the best guide because the visual contrast before exposure is not to be relied upon.

As a closing benediction, it should be said that these adjustments, as one gets accustomed to the work, soon become a very simple matter, and undivided attention can be given to the work in hand.

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## MARKING TIME IN CAMERA WORK

Sometimes in surveying the field of photographic production, especially in amateur directions, one is confronted by the impression that though the output is large, there is stagnation in invention and originality. Such a phase is apparent just now from a study of the work of those which is published in the periodicals and shown at the expositions. The falling off is neither in quality nor quantity, for both are at high water mark, but there is no sign of a break from the rut of conventionality into which photography has fallen.

But this is not wholly a bad sign. We cannot expect strikingly new departures in photographic procedure and practice every year at this advanced stage of the art. The most we are entitled to look for is a gradual levelling up, a gradual improvement in our results. And that comes with practice and experience.

The extremists in photographic printing have had their day, or is it that we have grown accustomed to accepting as legitimate that which a few years ago would have caused us to shudder with horror at the violation of photographic technique? If the critically sharp all over school could come to life, how it would rub its eyes at the diffused focus, the softness of definition, results that are now so prevalent and so popular.

Of course, there is nothing to be dissatisfied with in this general levelling up. The present generation is more intelligent than its predecessor. The race progresses. We do things today, and in a manner, that our

immediate predecessors would have considered impracticable if not impossible. Well within memory the taking of a snapshot in the 1-500th of a second and of obtaining an artistic result would have been scouted as absurd. But—the shutter moves and emulsions are exceedingly rapid these times.

If no photographer therefore is "setting the river on fire," hordes of them are turning out splendid work and naturally will continue to do so. Reputations in photography are made locally these times, not often internationally. We admire and appreciate Misonne, Keighley, Mortimer, Furley Lewis, and other workers from Europe, but it is hard to trace their influence on American photography. And the same may be said of many others.

The Salon idea is tending more and more to becoming purely local. Photographers at a distance are becoming increasingly chary of sending their pictures thousands of miles for exhibition. "The game is not worth the candle." On the other hand, each country, each pictorial center, is becoming more and more self-supporting in its entries. The conclusion is irresistible that the widespread diffusion of photographic knowledge and ability make for the growth of the community idea in pictorial photography, not a bad symptom of all round progress.

A publication like THE CAMERA therefore answers the purpose of an exhibition, for it brings before its readers the best work of the world's pictorial producers, thus obviating much travel in the pursuit of knowledge of the subject. So if we are marking time in sensations we are not doing so in other respects. Photography is advancing steadily but uniformly and will continue to progress.



## ABOUT MOUNTING

It may have been noticed by the non-photographic visitor to an exhibition of art photography, that it is characterized by a uniformity in size of the pictures submitted. It looks as if it were due to a prescription imposed upon the contribution, and this supposition is possibly correct, though hardly is it a forced requirement, but rather the result of conformity to convention.

Most of this large size work is the product of enlargement from small negatives. In a good many cases the enlarged presen-



tation may be an improvement on the small picture, or it may have been serviceable in isolating some particular pleasing part of the small subject from irrelevant surroundings, the abstraction of a gem from its matrix. But sometimes the enlargement may but poorly set forth the initial virtues of the small picture.

We do not want here to go into a demonstration on this topic, as our subject is something different, but may briefly say that often the values of a small picture are distorted, or its light and shade scheme put out of harmony, by dissociation in the large picture of the masses. But let us get to the consideration of another feature palpably exhibited in these shows of pictorial photography—that is, the manifest uniformity in the character of the mounting of the pictures “All ever the same”—evinced a total disregard of the necessity of proper association of the picture and the mount.

Selection in character of the mount is seldom made upon any rational principle, that is, it is not influenced by any rule of artistic taste. The mount is called to do service, only of isolating the print from its surroundings, drafted into service without consideration of the possibility of definite injurious effect upon the tone of the picture.

Experiments made with different tints of the mount show that the mount may either enhance the beauty of the picture or do positive injury thereto. It is dynamic not static in its effect. In the first place, the nature of the subject of the picture, as well as its surface presentation, must be taken into account in determination of a suitable mount for it. A portrait, or genre, requires a different sort of isolation from a landscape or architectural subject, and a glossy surface disports itself differently from a plain surface, when both are subjected to the treatment of the identical mount.

Let us interpolate here as to choice of surface for interpretation of print qualification. Matt or dull surface seems to have predominance in the choice of the artist, indeed it looks like a prejudice against any surface savoring of gloss. The fine qualities of a negative may be better brought out, at times, by expression upon a glossy surface than could be done in a matt surface print.

This should always be considered in the selection of surface presentation. A negative, unsuited to platinum or bromide, may

yield really beautiful results with P. O. P. (albumen).

Now let us get down to our subject directly. Let us try to put the subject on a scientific basis, inasmuch as aesthetics is subject to scientific principles, to the contrary notwithstanding. Everyone knows of what value to the painter is the knowledge of the simultaneous contrast of colors, but all do not appreciate that it is of equal value to the photographer who works almost exclusively in monochrome. The photographer must know the effect of the juxtaposition of light and shade to produce certain definite results in his photographic picture. The light tone of one object may be actually (visually) made darker in tone when placed in influence of a tone much higher. A piece of gray paper out in strong sunlight is brighter than a pure white piece in a darkened corner of the room.

An object of a certain tint always shows up darker when placed near to an object very much lighter than itself and *vice versa*. Take, for instance, a piece of medium gray paper and note the effects produced by placing it successively upon grounds lighter and darker than itself. Upon a lighter ground it looks much darker than it actually is, while upon the ground darker than itself, it appears much lighter than we know it to be. It is hard to realize that the two pieces, cut from the same sheet of gray, should show so differently.

It goes without saying that this change of brightness in tone by contrast with the ground on which it is superimposed, is just what takes place when photographic tones are brought in juxtaposition. When a certain tone in the photographic picture is associated, visually, with the tone of the mount, there is a change effected. What is the philosophy of this? It is well known that when we look at an object we receive not only the impression due to its particular color, but also an after-effect, resulting in production of the complementary color, and when we look at a bright thing and immediately turn our eyes to a dark surface, we get a superposition of impressions on the retina, and a consequent modification thereby of the original impression.

The tonality of this impression is therefore altered, and, remarkable to say, the modification is more manifest with neutral tints of color than with positive colors in juxtaposition. We use, as a rule, neutral tints in the mounts for our prints, and it follows that the same effects are manifest,

visually, when the tones of the print are brought in juxtaposition with the tone of the mount.

Suppose we have a landscape with the distance presented in delicate grays, and the pictorialist wishes to preserve, intact, this delicacy of tone. He conforms to the prescription and mounts his print on a white mount. The eye, simultaneously or alternatively at short interval, receives the impressions from the distance in the landscape, and the glaring white surface of the mount; a physiological action of vision takes place, as in the case of the papers mentioned above, a tonal change in the aerial perspective (the delicate gray distance), is effected by the simultaneous contrast of mount and delicate gray tones, with the result that the gray of the image is intensified in tone and its delicacy consequently destroyed.

The distance is made more definite and distinct, and the whole character of the picture changed thereby. But remove the print from the white mount and transfer it to a mount of lower tone and the beauty is restored. The mount may be truly called the wedding garment for its entry into the feast of art.

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## PHOTOGRAPHY AS A MEANS OF ART EXPRESSION

Photography, after a contested struggle from its very inception, has ultimately won recognition in the category of art reproduction of nature, as one method, along with the other monochrome methods of pictorial presentation, where the eye, through the brain, may be trained to the perception of the beautiful. The rendition of a landscape picture, or a charming portraiture by means of the camera, is no longer attributed to a fortuitous occurrence of the pictorial, but as the outcome of deliberate purpose of the artist who has essayed photographic means instead of employing the means of the painter.

Any prescribed distinction, between selection and production of the work, is an impossibility, inasmuch as the means, whatever they may be, cannot perform without the artist in control. The term composition, as applied to photographic art production, will not admit of any strained interpretation, put upon it by the particular critic in his narrow conception. Composition in photography refers to the entire work of art, not to any particular factor of it. It refers to the selection of the subject itself, to the

point of view taken, to the control of the exposure, to the plane of artistic focus, to the development, printing, posing, lighting, adaptation of background, decorative arrangement of lines and masses of light and shade, expression—in fact, everything indicative of the personal taste, judgment and skill of the producer to effect that illusion which we call the picture.

Someone may argue that inasmuch as photography must take things as they are presented, therefore selection of what is pleasing is the only resource of the photopictorialist. But the answer to such is that the photographer is by no means limited to a faithful record of what is presented. If he has artistic instinct, he can make the eye of the camera subservient to the natural eye and control it to his bidding. For do we not see abundant evidence of individuality in the work of photo-pictorialists?

The impressions from the identical scene vary in character, according to the artistic temperament of the artist, notwithstanding his inability to alter in any way the actual form of things in nature. It will be conceded that painters are often faithful to reality, but withal original in the expression of their individuality of treatment. The man, whether painter or photographer, who is an artist, will have in his picture naturalness as well as decorative arrangement.

The constant changes in natural phenomena, the innumerable modifications effected by light, atmosphere, etc., open up to the selective ability scene after scene of beauty which lend themselves to expression of sentiment. Nature is a broad field for discovery, a field yielding rich harvest to the industrious tiller. No great painter ever allowed the finest work of art to stand between him and nature.

As the work produced depends for its effect essentially upon the producer, the result is conditioned by the mental endowment of painter or photographer. Both determine the presentation of something which shall give esthetic delight. Both are purveyors of artistic joy to the community, each, therefore, equally an artist.

But at the outset of a discussion of the functions of either painter or photographer, in effecting the same end, the question is relevant, that if our photography be entitled to acknowledgment as a means of art, in standing with the other art means of reproduction in monochrome, what is the particular phase of photographic art upon which it establishes the claim? Is it insistent in such contention, that its scope



be severely limited to reproduction of what is alone fitted for the purpose of art by the exigencies of photographic practice?

That is, can photographic art go no further in its aspirations than is possible to the automatic mechanical factors employed? Painting, it must be allowed, has its own legitimate methods, but such methods, obviously, are not legitimate for photographers aspiring to art rendition, for the painter is justified in having recourse to all sorts of devices to cheat the eye, by illusion, into a belief that it sees the three dimensions of matter on a plane of only two dimensions.

The painter must convey the impression made on his mental perception, but it need not necessarily be in terms of what his eye has actually optically had cognizance of. Painting suggests natural truth by reflecting the painter's particular mood, even though he mask or obscure what may have been definite and distinct in the actual. To convey his particular motive, he is permitted to falsify so as to give the pleasing illusionary effect. But when it comes to the delineation of nature, as absolute truth, in terms of ornamental beauty, both painter and photographer are in the equal attitude for pictorial utterance—a translation of the actual record before each.

The actual translation is legitimate art for both painter and photographer, and it is eminently unfair to stigmatize work of the photographer, who appreciates equally the beauty of the scene, as something purely mechanical, simply because the photographic-artist has been relieved of the burden of mechanical skill for adequate expression by the tools he employed, the lens doing the labored acquirement imposed upon the skilled draughtsman. So then we confidently may say that monochrome art by photography holds its status in art by *fee simple* of its faithfulness of reproduction of what is beautiful in nature, and not by any endeavor to imitate what the painter lawfully effects by device and study of illusionary method. All photographic art must show its basal evolution in the camera—and we can say without gainsaying that the best pictorial work by the camera never evades the evidence, but exhibits its power of control over the means of exploitation. Every work worthy of being accounted an expression of artistic sentiment is a visualized thought of the artist about the beauty of things. Hence, the importance of self-culture, of the training of the mind to recognize in nature what best embodies the

desired impression produced. What is uncommon, unusual, some grand presentation of nature, forces itself upon ordinary observation, but this does not imply that the recipient is possessed of artistic vision. Artistic instinct is a special endowment, which sees beauty in the familiar, in the ordinary, the commonplace, the oft repeated. The mere copying of what everyone sees, or is forced to see from its obtrusiveness, is not evidence of artistic inclination. It will not suffice to point the camera at something which compels attention, and expect laudation because it has been technically well handled.

Photography may be made suggestive by something which the mind communicates to the subject, just as painting is suggestive of the feeling or emotion of the painter. By proper manipulation of the commonplace, the intensely realistic things all about us, by studying effect of contrast, association of tones, angles of illumination, etc., the real artist can make a picture, no matter what medium he elects. Idealism is not the creation of something transcendental, something out of this sublunary sphere, but the adaptation of the real to embody the ideal.

Photographic art is realistic art, but it is, at the same time, imaginary work. The parts stand for the whole to be imagined. We need not, to be true to photo-realism, make our picture so palpable that nothing is left the mind to speculate about, nothing for play of the imagination, nor need it be so obscure that it needs a commentary. We feel justified in saying that the reproach of realism as militating against the artistic claims of photography is unfair.

"O how much more does beauty beauteous  
seem

By that sweet ornament which truth does  
give."

It might be asked, how has it been made possible to photography to take on this vaulting ambition to its place as art, and the plain answer is, by the removal of the impediments which hampered its aviatorial flight. In its early practice it was much restricted, both for want of means and material for adequate expression. It was the unchartered liberty accorded by the discovery of the gelatine dry plate which allured the amateur to appreciation of the artistic possibility of the flexible medium for exploitation of pictorial sentiment.

The rapid progress is due essentially to the audacious amateur, who fearlessly

entered upon hitherto proscribed provinces. He has made that which was once proscribed legitimate, in his performance, in striving to get the spirit and motive of the original.

Photography has been called, condescendingly, a means of reproduction in art, admitted a Cinderella to the company of artists, the accommodating drudge, grateful for the crumbs from the master's table, but now photography occupies a place in the temple of art and receives genuine recognition. Photographic art, as we now know it in the studies of its most noted exponents, is not a mere record of facts, fine as the facts may be, but often an expression of the sentiment inspired in the artist by the contemplation. Why should the artist photographer, any more than the painter, be the slave to method, to have his work stigmatized as something necessarily mechanical?

So judged, is not all art mechanical?

Photographers have awakened to a realization of their prerogative and they are not slow in asserting it.

True, we find some shameless imitators, some palpable copyists of the masters of the profession, some feeble tentative feelers after high sentiment, who repudiate advice or the need of knowledge of first principles as guide to higher aspirations.

But we see the same in the ranks of the painters, yet do we discredit painters' art?

Yes, pictorial photography has come so far to its own that it should no longer be designated "pictorial photography," but as one of the means of production by art in monochrome.

✱

## LONG VERSUS SHORT FOCUS LENSES

Long focus lenses, wherever practicable, are to be preferred in work that admits of it, because a more natural and pleasing picture results than with short focus lenses. The eye takes in a comparatively narrow angle of view and sees further ahead than sideways. And we naturally look for the same effect in photographs.

Many photographs are taken with lenses of comparatively short focal length and thus we do not obtain this admired naturalness of effect; on the contrary, we obtain distortion, the appearance of the image being too large and exaggerated in proportion.

"Distance lends enchantment to the view" is a useful axiom to keep in mind when

selecting lenses for your work. In other words, the farther you can get away from your subject or object the better.

Of course, wide angle, *i. e.*, short focus work, is at times obligatory, as the photographer is not always master of the situation. But whenever he is, the longer the focal length of his lens, the more admirable will be his results. The remark applies to portraiture as well as to other kinds of work. The tendency to make large heads and shoulders sometimes produces grotesque effects. This sort of thing obtains in photographs used even in news pictures. Before us, as we write this article, is a page of such things. Many of the examples would look better and more natural if taken with longer focused objectives.

Most working photographers are equipped with a battery of lenses, and at times careful discrimination in their use leads to results that are satisfactory in the ratio of their naturalness of effect.

But what is a long focus lens? it may be asked. Roughly, it is a lens whose focal length exceeds the length of one and a half times the base line of the plate, or, to put it in other words, it is a lens whose focal length is such that it allows you to get the maximum distance from your subject, without losing any of its essential features.

The "close up" tendency in practical work is therefore to be avoided whenever it is possible to do so. People, unfamiliar with photography are, as a rule, at first unable to discriminate between long and short focus work, but we have observed that after a time they do not fail to prefer the photographs which do not include so much subject and show effects of "distance."

A judicious use of telephotography is also to be advised, the far-away effects so obtained always being appreciated.

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## THE RELATIVITY OF THE MASSES IN THE PICTURE

A picture, as a thing of construction, is something which is built up of elemental parts. It is an association of masses of various shapes and tones, and a coördination of lines in different direction to effect a certain pleasurable sensation by the manner of the arrangement. In other words, it has an agreeable pattern, independent of the emotional or intellectual impress it makes upon artistic consciousness.

The purpose of the artist is, therefore, contingent upon his ability to graphically



present what shall please our vision, and his effort should be to so use those symbols of light and shade masses and line coördinations as to clearly express his idea, embodied in the composition. A load of stone dumped from the cart or a pile of lumber deposited on the sidewalk, even though accidentally in a pleasing shape, connote no ability in the carter. It is only when the artistic mind calls them to its service that we realize purpose, in the way they are employed, and the evolution of something beautiful which is purely intellectual—something which is the evidence of creative power.

For those, therefore, who seek to give utterance to the idea, thought or emotion inspired by the impulse, had in observance of the beautiful in nature, it is essential to understand the language of art; how to deal with the elemental parts used in the structure, or synthesis of the picture, so as to bring out clearly what is of pure mental import. What we want here to impress upon the aspirant pictorialist is not relative to this intangible something called inspiration, necessary as it may be to attain to pictorial conception, but rather to direct attention to what might be designated the mere mechanical phase of picture making—to stress the importance of the knowledge necessary to put in place the elemental parts which effect the composition.

We want to emphasize the fact that the picture, whatever high emotional push it may have, is fundamentally dependent upon the skill with which it is built up. The eye needs to be trained to shape things agreeably. The design or pattern of the composition is of vital importance. Disregarded, it may wreck all attempts at a pictorial issue. We may possibly make this clearer by concrete presentation.

Let us suppose the artist has been using a small camera for his pictures, with the intention of enlarging them. If he has artistic perception, he will experience that it requires some intimate acquaintance and considerable practice before he gets to know the peculiarities of lenses as regards their size, or rather the images they project. He fails to note that not only is there a difference in the images, which he naturally expects, but also a marked difference, respectively, in the entire visual presentation of the same subject. If the focal length of the lens bears the same relation to the length and breadth of the plate, whether it be four by five or eight by ten, it will be found that exactly the same

extent of subject taken on the plate will be included, but the picture on the larger plate will be on a proportionally larger scale. So a twelve- or an eighteen-inch focus gives exactly the same amount of subject, when put from the same point of view, on the eight by ten plate that a six-inch focus puts on a four by five plate, but then note the distance between any two points on the larger plate is much greater than on the smaller plate. The increase of scale allows a larger minimum exposure, inasmuch as any blank interval that might be passable from a pictorial consideration (possibly an effective feature) might show up undesirably when presented in an enlargement.

Now while this necessarily pertains where direct negatives are concerned, it is more forcibly so when an enlargement is made from the small picture. It is argued that the enlargement is softer in effect, while the small picture exhibits greater contrasts and brilliancy. But in the majority of cases with the enlargement, there is the attendance of flatness, a loss of precision, practically misrepresenting the original subject as shown in the small negative, besides textural values are often interfered with and tonal differentiation is much less.

In comparing a print from a small negative with an enlarged print from the same, it must be admitted that the direct print has the relative values better preserved; there is more gradation in light and shade, more breadth in the presentation—why is this?

You will note on examination of the results that as the various areas forming the picture increase in dimension, they get more and more separated, thus leaving blank space between them, which necessarily flattens things and which may practically alter the perspective. There may be, perchance, in the picture, a delicate aerial distance which properly exhibits in the small direct picture, but which gets more or less obliterated in the enlargement thus interfering with the relativity of the pictorial planes.

Softness is a most desirable quality in pictorial work, but the penchant to get it sometimes leads the admirer to extremeness and destroys what he is really after. The imposition of some hanging committees, in prescribing a certain fixed large dimension for the exhibit, is often responsible for the "turn-down" of pictures which, in the small size, would have had due credit given them for their initial fine features.

# OUR PRINT CRITICISM DEPARTMENT

Prints to be criticised should be sent to the Criticism Department, THE CAMERA, Philadelphia. Only one unmounted print may be sent during any month by a reader. Full data must be sent on the coupon printed in our advertising pages. Always put title, name and address, and word "Criticism," on back of print.

Each month, before we undertake to pass judgment on the work sent us for criticism, we take a collective view of the contributions to get, first a general impression of the work, to find some feature in common, characteristic of the collection before we make individual analysis. The impression made by this month's contribution indicates that, in nearly every case, the photographer has been so obsessed with his efforts to present something pictorial, that he entirely disregards the technical quality of the photography. From the data accompanying the print, we are astonished to learn that a very indifferent piece of photography has been made with a very expensive and efficient lens, designed by skillful workmen to enable the photographer to overcome the impediments militating against his high art aspirations. It is a laudable desire to want to express yourself in artistic terms, but it is foolish to imagine you can get there by inspiration alone.

It is within the power of the photographer to make highly pictorial work, but to do so connotes not only the possession of artistic instinct, but also the coupling with this inspiration a training in the mechanical means for the expression. An artist has to be made as well as born and to be an artist in photography you must first learn how to handle the tools of photographic art.

If you inquire about those photo-pictorialists, who have produced the best work, in what is called the advanced school, you will find that in their earlier practice that they had mastered the fundamentals, the science of the art, that is, the knowledge of the rudimentary principles. They knew the laws of composition, conformed to them and so when it seemed best to them to deviate from these established facts, they knew how far to go and yet have their work in conformity to the demands of photography.

It is foolishness to attempt art before you

really know what art is. You must bear in mind that these fundamentals were given to us, discovered by men who had thoroughly mastered the technique of Art.

Learn the alphabet and the primer before you undertake to be fluent in composition. The lack of purpose in the picture, the attaching of a name to something after it has been photographed, cannot substantiate any claim for art expression. Progress is only possible when you yoke your art with handicraft. Indeed, it is best in your earlier efforts, in the breaking up of the fallow ground, to put the strain on the yoke-fellow-handicraft more than on art.

"Morning Mists," by Masayoshi Nakamura, exemplifies what has just been said about disregard of technical quality. A superb lens was used to get the subject, but no effort was exerted by the photographer to avail himself of its service. The lens properly handled would have given a differentiation of planes, not under the atmospheric conditions presented with difference in intensity, but still a differentiation such as the natural scene exhibited to the eye. No matter how misty the subject may have been, objects close up to the eye, and to the lens, too, would be slightly more distinct than the farther off planes; but here we have no distance shown at all. Sky and ground are of equal intensity, and so there is no suggestion of atmosphere or depth. Owing to the faintness of the print, it is impossible to get a half-tone reproduction.

"Lake Waubesa," by A. H. Longwell, as a piece of decorative composition is excellent. The outlining tree, its branches and leafage, form a pleasing line pattern and the spacing of the areas is good, but the photography is poor, hard and wiry from excessive under-timing. No differentiation of light and shade, no soft high-lights or luminous shadows, only violent contrasts of unpleasant whites and blank darks. No atmosphere, no depth to the subject and all because the photographer failed to appre-





"Lake Waubesa"

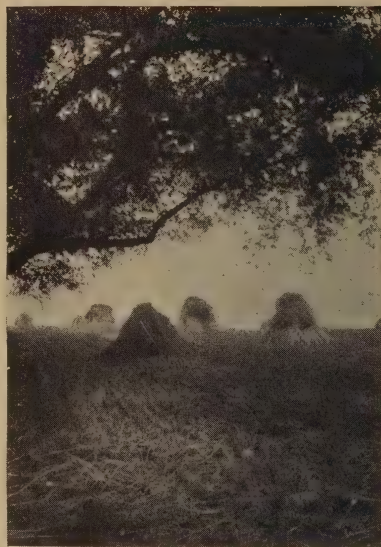
ciate that even the most beautiful subject in nature will not materialize in a photograph, if regard is not taken of the condition of the illumination, angle of light and correct exposure, to bring out the quality of things. This subject is under-timed, taken under too harsh a light, and of course forced up by development to hardness. The photographer can do nothing in development with an under-exposure to obviate its shortcomings as a picture. He has personal control only when adequate exposure has been given. A good subject here has been ruined by want of consideration of the mechanical factors involved. Made with a 3A Graflex, B. & L. Ic  $f4.5$  Tessar; 1-75th



"Little Cabin"

second exposure at  $f32$ , in September, at 2 p. m.; bright light; Haloid print.

"Little Cabin," by Lic. A. Valenzuela. Here is another good piece of composition spoiled by want of technical rendition. The various areas, foliage, sky, cottage, foreground nicely worked up and in good space relation; point of sight is well taken, but no regard is had to the values in the picture. There is no range of light and shade. The sky is of the same tone as the immediate foreground and the planes of the picture do not recede, so we have no suggestion of depth, relief, distance and atmosphere. Made in Mexico with a 3A special Kodak, fitted with B. & L.  $f6.3$  Tessar. One-half second exposure at  $f32$  on a bright day in May; 10 a. m.; film-pack; Azo print.



"Wheat Field"

"Wheat Field," by Maurice Smith. In selecting a subject suitable for a picture, the very first consideration is, or should be, how is it illuminated, what angle of light strikes the subject to put it in a favorable attitude. A subject having all the requirements of the pictorial, but seen under a certain kind of light, will not give a picture by photography. The light must be right. It must be a light which casts shadows so as to get relief of one part of the subject from the other. Now the angle of light to cast shadows depends upon the



"Beacon Hill Park"

time of day, and of all the hours of the day the worst for a picture is around noon, when the sun is vertical overhead and shadows nil. Your view taken at 12.30 P. M. was in such a light and so the effect is bad and nothing pictorial. Under other conditions of illumination it might have been made quite pictorial. A picture is a thing of various lights and shades and not one uniform tone throughout. Take the simplest kind of subject, with no particular show of the pictorial and put it in a pleasing light, and you will delight the artistic eye. Kodak, Jr., with Kodak  $f7.7$  anastigmat. 1-25th second exposure at  $f11$  on a bright day in July, at 12.30 P. M.; Azo print.

"Beacon Hill Park," by Eric Huxley. The good photography here has added to the effect and given us a pleasing picture of a scene not lending itself particularly to the pictorial. The composition has no point of central interest and so there is no feature of unification of the parts. The textural quality of the water and the foliage is well shown, because of the good technique displayed. The water has transparency and suggests mobility. Made in Canada with a V. P. Ansco and  $f6.3$  Ansco anastigmat.



"A Doorway"

1-25th second exposure at  $f8$  on a bright day in March, at 10.45 A. M.

"The Dam," by Horace Comfort. An example where under-timing has spoiled a subject which might have been pleasing by a time exposure. The result of giving a fractional exposure is seen in the rendition of the water. The title tells us it must be water, otherwise it might pass for snow. The quality of the foliage also suffers from the same cause. There is a hardness in the subject and a general incomplete or half-boiled look, which is annoying.

"A Doorway," by H. D. Ovington. A good architectural subject in which the structural quality is well shown, but pic-

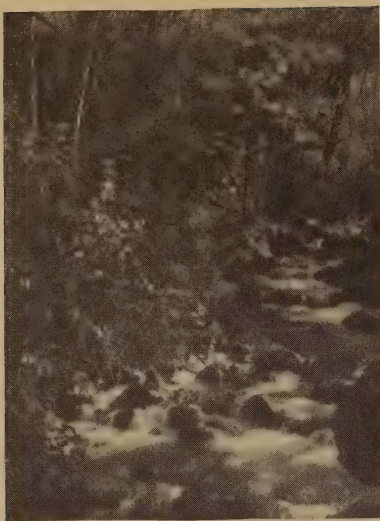


"The Arches"

torially it could be improved by giving the doorway more prominence and making it the initial feature, of which it is quite worthy. More foreground should also be given such a subject, the windows, to be sure, are good features in themselves and if included, then more of the entire house should be shown. Made with a Graflex and Wollensak Verito  $f4$  lens. 1-30th second exposure at  $f16$  on a bright day in April, at 10 A. M.

"The Arches," W. H. Pote. Another piece of architecture well handled and with good technical finish, taken from an effective angle of view and worth sufficient foreground to give the impression of stability belonging to such a subject. The foreground, too, is interesting without being too pronounced so as to draw off





"Ashland Creek"

attention from the main topic. The light and shade are good, giving the needed relief and suggestion of solidity. Structural quality of stones nicely shown. Made with a Graflex and  $f3.5$  Cooke lens. 1-10th second exposure at  $f11$  on a bright day in May, at 2 P. M.; Azo print.

"Ashland Creek," by N. H. Schammel. This would have been quite a pictorial bit had the illumination been different. The lower part of the view is the better, the tumble of the water is fine, but the foliage is too uniform and too much of one tone. No diversity of light and shade and consequently no contrasts or standing out of one part against the other. No suggestion of depth or indication of distance, no perspective to the view. It would have been easy to get this diversity, as it is made apparent by close study where differences of light and shade are favorably indicated.



"Peace"

These parts should have been put in more emphasis, and this no doubt would have been, had another hour of the day been chosen. Made in Oregon with a Finex camera and  $f4.5$  Steinheil lens and Compur shutter. Exposure not stated. Azo print.

"Peace," by Martin Beyer. This view lacks differentiation of light and shade and so looks flat and tame; all of one tone, no touches of high-light and no real deep shadows. As composition, it is defective, no central interest. The figures, to be sure, are in the center of the picture, but the center of the picture is rarely the center of interest, needs not be, anyhow. These figures really detract from the interest, for they show they have no interest by the formal way they are posed. Figures are



"Dora and Maria"

the life of a picture, but when they suggest interlopers, they are more honored by leaving them out. Euryplan camera and  $f4.8$  lens; Compound shutter. 3 seconds exposure at  $f8$ , on cloudy day in May, at 6 P. M.; Gevaert Sensima plate; Azo print.

"Dora and Maria," by H. H. Miller. The landscape setting comes in well here as a background to portraiture, but it would have been more effective had the figures been arranged differently. The lady in front is gracefully posed, but the lady behind her suggests uncomfortable crowding. We see only head and shoulders and really they seem part of the body of the front lady. The lady in the rear should have been otherwise placed, standing in front in conversation, or not included at all, inasmuch as she has no part in the



"A Tropical Flower"

motive. The motive would have been better with the single figure. Made in Mexico with REXO camera and Goerz Dagor  $f6.3$ , fitted with Compound shutter. 1-10th second exposure at  $f6.3$  on a dull day in March, at 4 P. M.; Artura print.

"A Tropical Flower," by N. C. Kauffmann. The maker of this picture presents nearly all the faults inherent in bad pho-



"What Shall I Read?"

tography. Evidently he has not studied illumination nor any of the rules of composition. The lighting is flat, so that we have no relief by light and shade. The figure is plastered against the background. There is no light and shade in the foliage; one uniform mass. The figure is badly placed, part of the body being cut off and she is doing nothing which connects her with the subject. The great leaves of the plant are the most prominent things in the photograph and they have nothing worthy of record, rather the reverse. Made in Mexico with a 3A Kodak and R. R. lens. 1-25th second exposure at  $f16$  on a bright day in March, at 3 P. M.

"What Shall I Read?" by Frank Mayer. The photographer here has not realized that composition is demanded of portraiture as much as of landscape. The lines and masses of light and shade in a portrait



"Pals"

must be studied to produce pleasing effect, but we see no attempt here. The lines are angular and stiff and there are no varying masses of light and shade. Everything lacks tonal value. The face is as blank as the collar and the dress almost identical in tone with the background, so as to seem part of it. The figure has no relief, no standing out. The head is bent at an acute angle and not in a graceful line. The arms are awkwardly arranged and the hands make two unpleasant white splotches. We have to study before we see the books on the rack, doubt if we would have had not the title suggested such. While the books are on the rack, the table has no visible means of support. Made with an Ica Ideal, with a Zeiss  $f4.5$  Tessar. 5 seconds exposure at  $f9$  on a cloudy April day in Switzerland, at 1 P. M. Lumière plate; Ronix print.

"Pals," by Gordon Ludwig. Incongruity of relations is a topic frequently written about. If the photographer would but stop





"Jack"

to think of the impossibility of two severed heads floating around the landscape, he would not prosecute such an atrocity as is here shown. One head is smiling, but the other is protesting the outrage, and no wonder. What is the use of writing about art in photography or of trying to guide the beginner in getting pictorial results if he will not exercise his own common sense and see the ridiculousness of such a presentation as is here shown? Made with a No. 1 Kodak. 1-25th second exposure at  $f11$  on a bright day in March, at 3.30 p. m.



"A Bostonian"

"Jack," by Fred P. Chrisman, D. D. S. The relation of figure to background is here properly considered. The background landscape is kept in subordination, the figure demanding more emphasis than the scene. The lighting is fairly good for outdoors, while the costume is suitable to the season as indicated by the bare boughs; it is not pleasing as to drapery, not being susceptible to treatment for agreeable line, stiff and rigid. Note the unpleasant combination of lines made by the flap of the coat on the knee and the line of part of the skirt, and these with the lines of the pant leg and shoe. In good composition, lines tell. They must be such as are agreeable to the eye, curved, not acute or right angled. The photographer's technique is good and if some study is devoted to pictorial presentation of the figure, we predict good work. Made with a 3A Kodak and B. & L.  $f6.3$  Tessar. 1-25th second exposure at  $f6.3$  on a dull day in May, at 3.30 p. m.; Azo print.



"The Spirit of Spring"

"A Bostonian," by Wm. H. Walton. A case where want of technical quality ruins a subject of considerable merit. The pose, spacing and expression of the model are excellent, but the hardness, violent contrast and lack of gradation, due to under-timing, nullifies all the virtues. 1-25th of a second, under an intense illumination uncontrolled, gives chalkiness in the high-lights, no modeling of the flesh, no rich shadows, but only unluminous blank black spaces joined to harsh whites. A knowledge of the mechanical means of manipulating would have made "A Bostonian" a charming picture. The photographer should know how to handle his tools, otherwise all his artistic



"The Creek's Elbow"

intention is in vain. Made with a Kodak and  $f7.7$  anastigmat. 1-25th second exposure at  $f7.7$  on a bright day in June, at 3.30 p. m. Film tank developed; Azo print.

"The Spirit of Spring," by Burton Slade. Subject well handled and fair as artistic features are concerned and in good illumination. Flesh values fairly indicated and the drapery structure shown, but the photographer, by attempting to emphasize both the landscape setting and the figure, to make both equally attractive, has materially injured both. The figure is the subject here and the landscape only accessory. Sacrifice is demanded in all art, there must be something better pronounced than the rest. Here, had the photographer focused so as to throw the scene back some, and not so distinct, he would have had the needed atmospheric surrounding and the model the artistic relief which it needs. Made with a Graflex and B. & L. Tessar  $f6.3$ . 1-135th second exposure at  $f8$ , on a bright day in April; film-pack negative; Velox print.

"Manhattan Bridge Plaza," by Sam Suanopky. Architectural photography demands good technique with a vengeance. It also demands some suggestion of stability not evanescence—appearance of vapor. It should show, too, that it is something solid and not a flat thing of one dimension. Now the photography of part of the bridge has nothing to show that it has any pressure or resistance and how can it represent a solid, massive structure. Never try impressionism



"The Stately Palms"

on such a subject and we would further advise study to have the camera on a level. This is a most carelessly taken piece of work. There was no need of giving it a fraction of a second, not much danger of it moving. You need to study the primary principles of the art. THE CAMERA has published some excellent papers on architectural photography. We recommend their perusal. Your print is too poor to make a reproduction.

"The Creeks Elbow," by A. E. Woodworth. The point of sight has been nicely selected to give good perspective of the scene. The composition is good, the two main masses balance well, the foreground is well proportioned and the decorative effect good, the various lines combine to make pleasing arrangement and the general tone of the picture is pleasing. The excellent photographic quality enhances the good features of the composition.

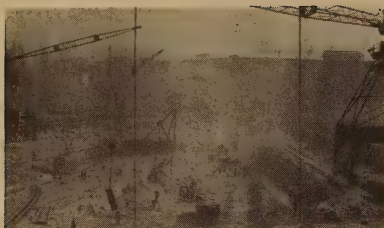


"After the Shower"

"Stately Palms," by J. C. Ziegler. The subject itself is not one lending itself to pictorial intention. It is nothing but a record and not a pleasing one at that. Nothing as composition, in fact, a congregation of unpleasant repeated incidents. There is not even good technical quality to redeem its faults. Hard, contrasty and without a particle of gradation.

"After the Shower," by Walter J. Mellies, M.D. The title presupposes some presentation of nature after a rain, but what is there here to indicate an after shower effect but the wet pavement, which might have deliberately been made wet by means of a hose? By whatever means the wetness was accomplished, the effect is poor, the reflection is in the minimum, in fact, only that made by the electric light. Such subjects demand exercise of some skill in photography to show up well. The view here has nothing of interest and is not





"Work"

redeemed by good photography. Made with a 5 minute exposure, at 9 P. M. in April, with a Graflex and  $f4.5$  Graf lens. Artura print.

"Work," by Ralph F. Rhodes. Too much is taken in for the small space allotted. The subject seems to have many points that could have been made interesting, but the attention is so distracted by its wandering



"Afternoon Shadows"

that nothing is reached. It needs concentration. The center of the view, if brought out more definitely by isolation and magnification, shows features which would give something pictorial and full of action. We recommend enlarging this section. Made with a 3A Kodak and Zeiss-Kodak  $f6.3$  anastigmat. 1-25th second exposure at  $f6.3$  on a bright day in March, at 3 P. M., in Alabama. Speed film; Azo print.

"Afternoon Shadows," by James Bowers. The light on the subject is too much sup-



"Fox River"

pressed, due to improper use of the filter. The character of the snow is not indicated. The high-lights are too depressed and the shadows dull and without gradation. The division of the subject is poor. Made in Iowa, with a Graflex and  $f4.5$  Tessar. 1-10th second exposure on a bright day in January, at 2 P. M. on a Seeds N. H. Ortho plate with a 3-time filter. Bromide print.



"Winter"

"Winter," by H. Scheiner. The subject is under-timed, hence the violent contrast. It is a common mistake to think that snow must be taken at the highest speed. Snow texture demands special treatment to get the natural softness and luminous shadows. The sky in the view is the best feature. Ica camera and Carl Zeiss  $f4.5$  Tessar fitted with a Compur shutter. 1-50th second exposure at  $f16$  on a bright day in February. Ortho plate; Azo print.

"Fox River," by Russell Whittemore. There is no attempt here at composition, merely two broad unrelated masses. No perspective, no differentiation of pictorial planes, no variety of light and shade, no central feature. Made with a Brownie, on a bright day in July, at 10.30 A. M.

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NOTE.—In many sections the daylight saving time will be used. Our readers, in sending in data with the coupons for this department, will please give us the natural or actual time and totally ignore the so-called "saving" time. The correct sun time is wanted only. Also, if you make the picture in Florida and you live in Maine, please state that the photograph was made in Florida, as we are apt to confuse it with your address.

# QUESTIONS and ANSWERS

All questions relating to technical matters, processes, working instruction, etc., are referred to competent experts in the particular subject referred to, and the utmost is done to insure reliable and practical answer being given.

Correspondents are requested to first state their case, and then number each question. They should also write on one side of the paper only, and enclose correct name and address—not necessarily for publication. No attention will be paid to anonymous communications nor to those only signed with initials.

We do our best in all cases to publish the replies in our next issue following the receipt of the inquiry, but cannot absolutely guarantee this.

*I prefer to work with plenty of light in developing my gaslight prints. Have you at hand a formula for yellow safe light which will allow protracted exposure?—H. O. W.*

It is always better to use a safe light yellow as you can work deliberately and with safety and can see gradation. Make a tartrazine gelatine solution with 0.8 grams to 100 cc. of water. This in English measure is  $3\frac{1}{2}$  ounces gelatine with 12 grains of the coloring matter. We use two 8x10 glasses and coat each plate. By binding them face to face, an excellent safe light results. Bromide papers are not safe in this; they demand orange light.

*Has cinematograph film always been made of the same standard size? I am told that old film units were much larger.—I. E. M.*

The necessities of the motion picture trade and urgent demand for films to interchange everywhere are responsible for the present standard. A much larger size was the old Biograph. The present standard with  $\frac{3}{4}$  by 1 inch units came naturally, as it was discovered what practical advantage came about by ability to use short focus lenses. Naturally, while the angle embraced was the same, the covering power in actual size was less, but with the wonderful depth of focus increase came possibility of greater enlargement ratios, without loss of definition on the screen. There are smaller sub-standards for special purposes, usually sub-multiples, so that a half width film gives four units to one, if same proportion of size, 3 to 4 is preserved. Similarly one-

third width gives a 9 to 1 ratio. This means that 1000 feet can be replaced by 250 feet in one case and 111 feet in the other. Two-thirds and three-quarter width have been suggested also. The difficulty encountered is grain, which is 2 times and 3 times normal on the sub-standards, and of course greater prominence is given to mechanical defects, scratches, assuming that images as large as those possible with standard units are demanded.

*What size condensers do I need when I enlarge from a 14x17 negative, and what form of condenser do I need?—H. S. L.*

The diagonal of a 14x17 plate is 22 inches and this would be the least diameter necessary for such work, but we are unaware of any source of supply. The largest condensers available are 14 inches diameter. These are usually 21-inch focus, with a combined focus of about one-half of this. They are just large enough for 8x10 and then are satisfactory only when the projection lens is of large enough diameter to take the cone of light condensed by lenses without having any vignetting by edges of mount. This means you are forced to use a lens of longer focus than is really necessary to give satisfactory covering power, and as a rule you cannot obtain such lenses, unless those of the portrait types which have a strongly curved field. Years ago the solar printers used some thin condensers, double convex instead of plano-convex, but these would not be suitable, although they were obtainable in very large sizes. For artificial light enlarging the regular plano-convex lenses, placed with the curved sides



facing one another are needed. The blocks of glass above 14 inches are hard to make optically homogeneous and free from annealing strains. "Striations" or "feathers" or "cords" show and are projected on the screen with the regular image itself. The larger condensers are very heavy, and if quickly heated and subjected to drafts will break. The expense is high and it would seem as though one might better invest in a bank of Cooper-Hewitt mercury vapor tubes, using them close to the negative with one or two diffusers between them and the negative. The actinic value of the light is high and the space needed for a lamp housing is saved behind the negative. Moreover, no adjustment of lamp, to and fro, as is the case with a condenser system. As the arc flickers and burns irregularly, it needs also to be adjusted sidewise, and up and down as well. We should be greatly obliged if any of our readers who have ever seen a condenser larger than 14 inches would communicate with us and give us the address. Customers occasionally dispute the information given by stockhouses and manufacturers about largest sizes that have been available in past, but we have yet to discover a condenser larger than 14 inches diameter in the plano-convex form.

*I wish to know the longest focus lens I can use in my studio. The smallest image I make is 2 inches high. How can I get at focus of lens to use? I have about 21 feet studio length.—S. T. C.*

You take up usually about 5 to 6 feet for background to sitter and for the camera. This gives 15 feet available working distance. We must, however, assume some average height of sitter, say about 68 inches—five feet eight. Two inches is therefore one thirty-fourth and the rule of conjugate focal lengths can here be applied. The lens to camera distance is the greater conjugate focus, and is the equivalent focus of lens used multiplied by one more than the ratio of reduction. In your case, you know the ratio, 34, and the greater conjugate, 21 feet, or 252 inches. We can therefore transpose the rule so as to bring out the unknown quantity—the equivalent focus. Obviously if we divide 252 inches by 35, which is ratio plus one, we will get the focus at once. In this particular case we have 7.2 or about  $7\frac{1}{4}$  inches. It is evident that 5x7 is about the limit of plate size and that you would need another lens for 8x10 heads. A 14-inch lens would give you a 2 inch head at about 17 feet, an 18-inch lens at 22 feet, etc.

*Why is it that lens manufacturers will not send telephoto lenses on approval, like their ordinary lenses? I wish to buy one, but the manufacturers say they cannot accede to my request. I cannot spare my regular lens.—J. O. J.*

We are not aware that this is the current practice. A telephoto lens is a complete unit like any other lens, but telephoto attachment is different entirely. These are not sent on approval for very definite reasons, according to information in answer to our inquiry. If the lens you have, the so-called positive of the system, is not of their manufacture, they must make an adapter of a definite length, according to optical characteristics of your lens. They cannot know the thread diameter of your lens, *i. e.*, they may not have accurate knowledge enough to take a chance. They must know whether the lens is to be used in original barrel or in a shutter, and if so, what shutter thread. Some lenses have flange threads readapted on the barrel to interchange in the shutter flange, or vice versa or both. These are the mechanical troubles only and there are also optical ones as well. All lenses do not have the same optical centre relations. Not only must a special front adapter for the positive lens be made, and centred optically with the negative lens, but the distance of the negative element, or telephoto element itself, must also be made correct. This means a special back adapter in some cases, and each attachment must then be properly and individually scaled as to magnification. If you have a lens of their manufacture, these difficulties partly disappear, but scaling and adjustment are quite impossible without having your lens at hand. In the case of an ordinary lens sent on approval and returned, it is suitable for another customer. In telephotos, the adapters have to be taken off, and labor is now wasted, as a duplicate order is usually not at hand. The telephoto system is a variable focus lens. Ordinary lenses, say 7-inch focus, will vary somewhat in focal length from exactly 7 inches. Each scale of magnifications is separately tested on and engraved on tube. From the above complications, you can readily see that it is for your own good that manufacturers demand the lens for fitting. It then becomes a definite task and when the job is done, the attachment will function completely, and allow intelligent use, so that you will then get results. As a compromise, you might offer to send lens

and to pay for fitting charges in case the outfit is returned. A telephoto system is hard enough to work with, even if conditions are accounted for and manufacturers hesitate therefore to have their products misjudged when they know that they cannot really complete the job without having the lens to fit. You cannot order delicate optical parts to fit existing parts like you do on an automobile. Sometimes it is a task to get a simple flange to fit, but this is often due to carelessness of customer. Having his lens before him, he has no excuse for not giving approximate diameter, besides exact name of lens and shutter it is mounted in. The same size lens may be mounted in many different ways.

*How can one tell when a print is thoroughly fixed? Is there any visible test or must one work by time alone?—H. F.*

The addition of iodide of potassium to the developer gives yellow silver iodide instead of whites on developed prints on gaslight papers. This disappears in the hypo. Ordinarily one depends on technique and practical experience and does not overwork the hypo bath. Manufacturers very carefully give you in the directions the number of prints a certain volume of fresh bath will fix. From this the square inches can be figured and the numbers of other prints calculated which will fall within this danger limit. Every print fixed loads up the bath with silver salts and the time per print for efficient fixing grows longer. The time for the fixing for the prints at the end of the run is given with ample leeway. A rough test has been that a bath that takes longer than 10 minutes to fix an unexposed plate should then be discarded. Of course, the figures are modified by abnormal temperatures, and cold baths fix slowly. Researches by Lumière, show that 10 to 20% plain hypo baths work about the same, an increase to 30% makes fixing  $2\frac{1}{2}$  times longer, and 40% slows to 4 times normal. Here is a new difficulty, as bad as weak hypo or overloaded hypo. Fixer is cheap and it is no trouble to heed the directions which are based on manufacturers' experiences. A drop from 68° F. to 50° on 20% strength triples fixing time. Warm hypo at 86° does not speed up much, but increases frilling possibilities. Acid hypo has other characteristics, but as above stated, working per directions really takes care of the situation. It is known that ammonium chloride added to hypo reduces dry plate

fixation time, but prints do not seem to respond to such treatment. On bromide papers, Lumière concludes a 5x7 needs 15 to 20 seconds with 100 cc. of 20% hypo at 64°-68° Fahr. Sodium bisulphite additions with or without chrome alum doubles the time for plain hypo. Up to 20th sheet little increase in speed is noted. Lowering 20% concentration as far as 7% has little effect on time. Normal room temperature is of course the best. Three minutes should fix any print completely, even if the bath is just at exhaustion point. A warning regarding handling of prints should be unnecessary. No print can fix properly unless constantly kept from matting together with others. Extra long fixing may reduce print density and is practically employed when prints are a shade too dark.

*What is pinakryptol and pinakryptol green used in desensitizing? What are the advantages over phenosafranin?—A. B. C.*

The first two are inventions of Dr. König, also the inventor of a well-known filter dye material. The first is a mixture of a colorless and a colored non-staining compound, soluble one part in 5000 of water and making a turbid grey solution. It reduces sensitiveness of an ordinary film to about 1-1100th. It is also suitable for orthochromatic and panchromatic plates and is better than phenosafranin regarding lack of gelatine stain. The second substance is in small crystals, which have a green appearance by reflected light. A 1 to 500 solution is intensely green and can be diluted ten times for actual use. It has a somewhat more intense desensitizing action. It equals ordinary desensitizers for blue rays and is better on the green, yellow and red ones. It does not stain double-coated plates, or those with gelatine backs such as certain cut films. Regarding phenosafranin staining, however, it is only fair to say, however, that its own color is such that it does not materially slow up printing, being fairly transparent to blue rays in printing lights ordinarily used.

*Please inform what is the best intensifier for use with negatives where intensification is needed to the very highest degree.—G. A. L.*

For this work the negative must first be cleared in a permanganate of potash solution, using 2 parts per 1000 of water with an addition of 20 parts of hydrochloric acid. The cleared plate is then rinsed and



developed again in metol-hydroquinone. The next step is bleaching with mercury bichloride using the developer again for the darkening agent. Then follows a mercury iodide treatment. Two solutions are made, one contains 3 parts mercury bichloride and 1 part hydrochloric acid in 100 parts of water. The other one is potassium iodide 5 parts, in 100 parts water. We add second to first producing a brilliant scarlet mercury iodide precipitate, but by keeping on carefully adding more, the red precipitate will disappear. The negative must be well washed from the previous mercury bath and is now treated with the iodide bath. The progress can be followed in the light, but will finally come to an end point. Should more density be required, the mercury bichloride-redevelopment process should be repeated after first redevelopment. The intensified image will bleach again just as though it did when the faint silver image was present, but once in the iodide it is not possible to do any more. The resulting image is brown and further contrast is also possible by printing with a violet color screen, which is made by soaking an old fixed and washed plate in methyl blue. R. Namias is the author of this building up density process, which was applied with great success in handwriting photographs of suspected documents. Quartz lenses also serve to help out in such work. They are useful where there is a suspected erasure, even when the document has been cleverly worked up with the various ink eradicators.

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### STANDARDIZING OF BROMOIL

In the May issue of the American photographic journal, *THE CAMERA*, appears an article with a most alluring title. It is from the pen of Miles J. Breuer, M.A., M.D., who writes on "The Standardizing of Bromoil." Quite apart from the question whether standardizing is possible and desirable in this connection, the subject naturally stirs one's interest, because the mere mention of it suggests advance in a process which hitherto has been as a sealed book to the majority of photographers. The reduction of the process to exact formulæ upon which results could be obtained with accuracy in all details is a subject well calculated to fire the imagination, and one looks eagerly for the evidence of it, which, sad to relate, is not too obvious in Dr. Breuer's otherwise interesting contribution.

A standardized process is defined as "one in which non-essential matters are omitted from the directions for its performance, and in which every condition which has any effect on the result is expressed in definite units of measurement," and then Dr. Breuer adds this encouraging information: "In this manner I have tried to standardize the Bromoil method. . . . My efforts have enabled me to secure results in a process at which my first attempts were consistent failures, technically."

A good deal of what follows is quite useful reading, but what one misses is the evidence of anything which can reasonably be described as adding to the store of knowledge on the subject, while one or two details are more calculated to depress than to encourage pursuit of the process. This is particularly obvious when the writer advises soaking of the bleached and dried print for precisely one hour in water at a uniform temperature which is not defined. One extract will speak for itself: "The control of the temperature of a tray is no easy thing, unless you have an elaborate laboratory. I have gotten the best results by setting my tray upon a pile of folded newspapers, covering with a board or another tray, and covering the whole with newspapers or blankets."

The fixing of a definite time for soaking is attractive, and one immediately looks for the bleaching formula which makes this interesting result possible and for the special fixing bath to follow it, but we are told "That it makes very little difference which bleaching formula is used." It is true that the acid bath is recommended, no matter what the bleacher, and other experiments have already established the advantage of the acid bath. This is a piece of sound advice. The presentation of some data upon the method by which this standard time of soaking is arrived at and statistics as to the behaviour of a definite number of prints bleached with different bleachers and soaked for an hour would have been interesting and informative, in view of the indisputable fact that some prints handled by methods hardly distinguishable from that used by Dr. Breuer will be ready for pigmenting within five minutes, while others demand any period up to an hour or more. The question naturally arises: do all the prints made and bleached on Dr. Breuer's system take pigment satisfactorily, and if not, what percentage of them do?

Unfortunately, we are not supplied with this highly desirable information.

On the all-important question of condition we are again disappointed. Alluding to the tendency of the print to dry during the process of pigmenting, we are seriously told that "This problem can be solved by heating an open vessel of water in the room for some time previous to inking and filling the air with steam." This seems to be a very elaborate arrangement to get over a difficulty which can be overcome by simply dipping the half-finished print in the soak-water from which it was originally taken.

There are two points at which Dr. Breuer provides food for thought. He draws attention to the influence of alkali (in developers and in water) and writes of the value of distilled water in the conduct of the process. With regard to the latter assertion we may take it that the use of distilled water would, in the case of those who have the facilities and the inclination to use it, be an advantage. With regard to the other point there appears to be an avenue for profitable experiment. It is interesting to note that Dr. Breuer guards himself throughout the manipulation of a Bromoil print against what he seems to regard as the sinister influence of alkali. He develops with amidol only to avoid the use of carbonate of soda and avers that it is in the presence of free alkali in other developers that makes them unsuitable for Bromoil prints. "Commercial hypo," he states, "may be alkaline enough to spoil the gelatine film for pigmenting," so he uses a fixing bath containing soda sulphite, citric acid and soda citrate. He goes so far as to say that if the soaking water is alkaline it should be acidified, using acetic acid for preference. This is very interesting, and one regrets that Dr. Breuer has given us so little information about the results of his experiments in this direction. No doubt the subject will be followed up by the more serious "Bromoilers" in this country, and in the meantime Dr. Breuer may feel inclined to tell us a little more about it.

There is undoubtedly some elusive factor connected with the manipulation of a Bromoil which has so far not been harnessed, and any suggestion which may lead experimenters on the path of it, deserves serious attention. In the hands of certain workers such details as special developers, special bleaching baths, special fixing baths and special water supplies appear to have no special influence, but for the rank and file

some degree of standardization on the technical side of the process seems to be a necessity. Whether Dr. Breuer has touched the weak spot remains to be seen.—F. T. U., in *The British Journal of Photography*.

#### DR. BREUER'S REPLY

*Dear Mr. Chambers:* I feel very much honored indeed to have my humble little article discussed in London.

The *B. J. P.*'s editor's article is very fair. I do not have much to say to it, except to thank him for his fine discussion, as we say in our medical society meetings. He calls attention to the fact that I have not added much to our store of knowledge on the subject; if I have added anything, I shall be proud. My aim was not to add knowledge, so much as to adopt the proper mental attitude toward the problem. If my article stimulates anyone to work with a rigid system, I shall feel that I have accomplished much.

I might possibly say a word on the one thing that seemed to be a mystery to him, and that is, why do I soak the paper for an hour. I do not have, as he seemed to suspect, some occult reason for making it exactly one hour. But, in my hands, as well as in the hands of many who have published works on the subject, one hour seems to be the average period that is found satisfactory. I stick to the one hour, to avoid confusing variation, and do not wish to vary it, until I know why I am varying it.

I shall answer his one direct question. I have not had any technical failures in inking, since I have adopted the "system." Of course, some ink better than others, for reasons that are a mystery to me; and some are not pictorial successes. But all take the ink at least technically well.

MILES J. BREUER, M.D.

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#### THE EVOLUTION OF THE LENS

Doctor R. Bornet contributes to *Photo Pratique* three series of diagrams of the modern lens in its evolutionary stages, which is very instructive to study. The first series deals with uncorrected lenses. There is first of all the simple non-chromatic meniscus, concavo convex, which would not form an image. Next comes the achromatized lens of Chevalier (1839) with which probably Daguerre obtained his results. In this a plano concave is cemented to a double convex. Ross followed in 1857 with a double concave cemented to a



double convex of unequal radii of curvature (a "crossed" lens it was termed) and then in the same year, both Ross and Grubb obtained correction by cementing concavo convex lenses of unequal radii of curvature. This period 1839-1857 marks the history of what is known as the simple, or single, uncorrected lens.

In 1865, Steinheil produced the first symmetrical uncorrected doublet, two simple lenses, each at the end of a tube. In 1879, both Dallmeyer and Steinheil introduced rectilinear aplanats, *i. e.*, rapid symmetricals, cemented doublets, each half of the combination being achromatized. Thus the development of the photographic lens from the achromatized simple lens of Chevalier (1839) to the corrected doublet of Dallmeyer and Steinheil (1879) covered a period of forty years. Meanwhile, in 1846, Steinheil introduced the portrait lens, the front element being a double convex cemented to a concavo plano, the back lenses consisting of a meniscus and a convexo-plano separated by an air space. This is the well known portrait lens of today and is characterized by large aperture, brilliancy of image, and roundness of field.

Until 1890, when Zeiss introduced the first anastigmat, all lenses were constructed in accordance with the foregoing principles. Since the year named the development has been continuous, owing to the introduction of optical glass which admits of many forms and combinations, and perfect correction.

It is worthy of note that in 1870 Lincken-Sommen introduced the principle of diffusion of focus. This he did by constructing a doublet consisting of a front combination formed of a double convex cemented to a plano convex, the rear combination being a plano convex and a meniscus with an air space.

All these lenses were, of course, constructed of "flint and crown glasses" of low dispersive and refractive properties, that is to say, while physically and chemically pure, their power of diffracting and refracting light rays rendered small stops (with the exception of the portrait lens) almost obligatory, if marginal definition were aimed at.

Since 1889, more highly refractive and dispersive glasses have enabled anastigmats to be made with the consequent gain of greater working aperture and covering power, flatness of field, freedom from distortion and finer definition.

## THE SELENIUM TONING OF PRINT-OUT PAPERS

A. AND A. LUMIERE AND A. SEYEWETZ

Solutions of selenium, prepared with sulphides or with alkaline sulphites, have been used for various photographic purposes, in particular for the toning of chloro-bromide (gaslight) development prints, the fineness of grain of which lends itself particularly well to this process, resulting in a fine sepia tone. On the other hand, when the attempt is made to employ this toning process with print-out papers, such as gelatino-chloride or albumen, after having washed out all traces of soluble silver salt, it is found that the tones are eaten out and the whites of the prints stained, so that the process is useless.

We have recently been able to remove these drawbacks and to obtain prints having pure whites and at the same time to preserve the gradations quite as well as when using gold toning. This has been rendered possible by using as the toning bath a strong solution of sodium hyposulphite (hypo) to which has been added a very small quantity of solution of selenium in 20 per cent soda sulphite solution (sodium hyposeleni-sulphite).

It is, however, found that for the preservation of the purity of the whites it is necessary to remove every trace of soluble silver salt. Simple washing in water does not suffice for this removal; it is necessary, after washing, to treat the prints for a few minutes in a 20 per cent solution of hypo, then briefly rinsing them before toning.

The toning bath for P.O.P. prints is prepared as follows:—

A 3 per cent solution of selenium in a 20 per cent solution of anhydrous sulphite of soda is made and added to a strong solution of hypo in the following proportion:—  
Selenium solution in

sulphite .....	5 c.c.s.	45 minims.
Hypo .....	325 gms.	6½ ozs. Av.
Water, to make.....	1,000 c.c.s.	20 ozs.

When preparing a bath for the toning of albumen prints double the above quantity of hypo is used.

The solutions thus prepared are colorless, thin, and keep indefinitely without throwing down a deposit or suffering any change.

With P.O.P. the toning is very rapid, taking place in from 3 to 4 minutes, according to the degree to which the bath has previously been used. Albumen prints tone even more quickly—in from 2 to 3 minutes.

A litre (35 ozs.) of the toning bath serves

for toning about 80 13 x 18 cm. (half-plate) prints, corresponding to about 0.0015 gm. of selenium per 13 x 18 cm. print. Thus the process is very economical, its cost being considerably less than that of gold toning, particularly whilst gold chloride remains at its present high price.

The change of color of the image is not due, as in the case of gold toning, to a replacement of part of the silver image, *e. g.*, by gold, but is doubtless the result of simple deposition of metallic selenium upon the silver with formation of a complex of selenium and silver. That such is the case is indicated by the fact that no silver in a soluble form passes into the toning bath.

The tests for permanence which we have made show that in this respect the process is at equal to the customary combined toning and fixing. By suspending prints for a month in a wet state under a receiver in an atmosphere saturated with moisture we found that no appreciable change was observable in the prints, provided that the hypo had been washed out.

To sum up, selenium in the form of sodium hyposelenisulphite obtained by dissolving it in solution of soda sulphite, if added in very small quantity to a strong solution of sodium hyposulphite, forms a toning bath for print-out papers. This toning bath, which should not contain more than 0.15 gm. of selenium per 1,000 c.c.s. in order that the whites may be kept pure, may be prepared at a very low price and forms an economical substitute for gold toning.  
—*The British Journal of Photography.*

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## TONING BROMIDES BY THE COPPER PROCESS

JOHN H. HARRIS

The copper process for toning bromide prints is very simple and yields a range of colors from warm black to red chalk, governed by the period of time for which the print is toned. Unfortunately, like many interesting photographic processes, it is seldom brought to the notice of amateur photographers. If satisfactory and permanent results are to be secured it is essential that the details about to be described should be most carefully observed, otherwise uneven toning, spotty prints, and other troubles will present themselves. Briefly, the process has for its object the substitution of copper for the silver image of the bromide print, the extent of this change governing the tone of the image. When the silver has been

almost entirely replaced by copper the color is changed to red chalk. When it is intended to tone to warm black or sepia no diminution in the strength of the original image need be feared; but if the toning be carried further the print to be toned should in the first place be much darker than the final toned print is required.

The wet print, washed free from all traces of hypo, is first immersed for one minute in an acid clearing bath:

Hydrochloric acid

(concentrated) ..... 4 fluid drachms

Water (distilled) ..... 10 fluid ozs.

After a rinse under the tap the print is transferred to the toning bath made thus:

Stock Solution No. 1—

Copper sulphate ..... 60 grains

Potassium citrate (neutral) .. 290 grains

Water (distilled) ..... 20 fluid ozs.

Stock Solution No. 2—

Potassium ferricyanide ..... 50 grains

Potassium citrate ..... 290 grains

Water (distilled) ..... 20 fluid ozs.

The working solution is made by mixing equal parts of each stock solution. Solution No. 1 will keep indefinitely, but No. 2 should not be made more than a week prior to use.

The tone will vary according to the time that this bath is permitted to act. Five minutes' immersion gives a very rich and pleasing chocolate brown; while fifteen minutes' action yields a warm brown print; and after half an hour the color will have changed to red chalk. If these warm colors are aimed at, the original print must be very dark. During the toning the dish must be maintained in constant motion. Toning being complete, the print is rinsed under the tap and again placed in the acid clearing bath for two minutes. This time it is advisable to rub gently the surface of the toned print with a tuft of cotton-wool. A thorough wash in running water, or in many changes, during half an hour will render the results permanent.

In conclusion, it should be impressed upon the reader that the use of distilled water for making the solutions is very important. Distilled water can be purchased from the local pharmacist for about sixpence a quart, excluding the bottle. The two immersions in the acid clearing bath ensure even results and reliable working. Should any trouble be experienced in getting the highlights clear a greater proportion of working solution No. 2 should be employed.—*The New Photographer.*





## VIEWS AND REVIEWS



A very interesting catalogue on stereoscopic cameras has just been issued by O. H. Sampson, 510 North Dearborn Street, Chicago. Mr. Sampson is an authority on stereoscopic work and much information regarding the subject will be found in this beautifully printed book.



The Societe Francaise le Photographie has recently awarded the Janssen medal to Dr. C. E. Kenneth Mees; the Salverte medal to Mons. Alphonse Seyewetz; and the Davanne medal to Mr. W. B. Fergusson, F.R.P.S. All three gentlemen, as is well-known, are identified with the progress of photographic chemistry.



John Sterry died recently in Australia, at the age of 81. He was one of the first experimenters to recognize the value of Hurter and Driffield's work, and was for many years identified with photography in Europe. Several formulas were also associated with his name. As Treasurer of the Royal Photographic Society he also did good executive work.



*The Revue Française de Photographie* in a recent number, besides an article on the subject, contained many interesting reproductions of anaglyphs—clouds, statuary, an insect, a laughing and crying baby, the moon, together with colored pieces of gelatine by which the pictures could be viewed. We look for other reproductions in the photographic press, as these illustrations are exceedingly effective.



The publication, *Science et Photographiques*, published in Paris, has been discontinued on account of the high cost of paper, engraving and printing. It had a circulation of 25,000. However, the same company issues the well known *Les Nouvelles Photographiques* now in its fortieth year. While old photographic publications here and there are disappearing, new ones come to light. Generally speaking, photographic journalism is in a very flourishing condition, reflecting conditions in the industry.

Mrs. Minna Keene, the Canadian pictorialist, with whose work our readers are familiar, comes in for well deserved recognition at the hands of an Ontario publication, the *Brantford Expositor*. She specializes in nature studies as well as portraits. She is preparing an exhibit for the autumn show of the R. P. S. On the selecting jury of this exhibition is an American, W. A. Alcock, of New York. More and more is this continent exerting an influence on European photography.



The success of the recent photographic competitions by the house of Willoughby is responsible for a competition more broad in its scope and with fifteen cash prizes aggregating \$300. There are three classes—A, B and C—which will take care of the fellow with the little camera. Class B will take in pictures from  $3\frac{1}{4} \times 4\frac{1}{4}$  up to  $4 \times 5$ . Class C is for contacts or enlargements  $4 \times 6$  to  $8 \times 10$ 's. The competition free and open to all amateur photographers residing within a radius of fifty miles of New York City. Closing date is October 31st, 1924. Full particulars may be had of Chas. G. Willoughby, Inc., 110 West 32nd Street, New York.



Mr. Reginald Ford said in *The Referee*: "Many who have seen my film, 'Down to the Sea in Ships,' have asked how the whaling scenes were taken in an open and rough sea. As they even suggested that the scenes might have been faked, although they could not suggest how, I think it better to reveal a production secret which has never before been told, even in America. The camera was in one small boat, which followed, as closely as a sail and six oarsmen could make it, the furious flight of the whale and the other small boat which is seen in the picture. Now, it is not possible, as the skeptics have pointed out, to make films with a camera that is rolling about. Exactly. For this reason the camera was floated in an oil bath in the photographer's boat and kept on a permanent level in precisely the same way as is a ship's compass."

One of the many foreign journals to reach us comes from Bucharest, the former capital of what is still Roumania, for it yet remains one of the few European Kingdoms. It is printed in two languages, German and Roumanian, and contains many articles, but no illustrations. Yet, Roumania, according to many pictures that we saw recently, is a very picturesque country. We look for a forward movement there as German influence is very strong, and this in photography is an asset which is bound to assert itself in time.

\*

There is a reproduction in a European contemporary of a drawing by Cruickshank, who flourished in the '40's, of the method adopted for taking indoor portraits. The picture was made in the early days of the Daguerreotype and represents the sitter placed high above the ground on a platform. The camera is on a shelf near the ceiling. The entire scene is grotesque from the modern standpoint, but it is interesting as showing how far we have advanced in eighty years. The amateur had not then begun to appear on the stage.

\*

Night photography appears to be exceedingly popular amongst certain amateurs, reproductions of whose work we have had the opportunity of recently examining. Of course, the main difficulty in the sundown subjects is that of adequate exposure and the avoidance of movement and halation. It is many years since Paul Martin astonished the photographic world by his exceedingly effective night street scenes. He chose subjects to which he could give the requisite long exposures, backed his plates and developed very slowly and carefully. That is over a quarter of a century ago. Since then plates and films have been improved and heightened in sensitiveness vastly, and night or rather twilight scenes with the artificial illumination of street lamps do not present any insuperable difficulty to the painstaking worker. And we are at the season of the year when it is best undertaken, from June to October. Most important of all, in favor of this class of work, is the fact that besides the heightened rapidity of emulsions, the lens has also been quickened enormously. When Martin took his photographs, plates at 550 H and D, and a lens working at  $f/2.9$  were undreamed of. Nowadays they are accepted as a matter of course, enabling remarkable results to be attempted and obtained.

Entry blanks are now ready for the Third San Francisco International Salon, which will be held at the San Francisco Museum of Art in the Palace of Fine Arts, October 17th to November 23d, 1924. Last day for receiving prints is September 29th.

It is proposed to only hold the San Francisco Salon bi-annually in future because of the large number of existing annual international exhibitions and in order to obviate any conflict with the exhibition planned by the Pictorial Photographers of America to be held in New York in 1925 and bi-annually thereafter, the Fourth San Francisco International Salon will be held in 1926. The exhibition in 1925 will be restricted to Pacific Coast work. This modification of plan has been determined after a conference and in co-operation with the Pictorial Photographers.

Entry blanks for the Third Salon may be obtained from H. A. Hussey, Secretary, 64 Pine Street, San Francisco, Calif.

\*

*The Art of Pigmenting.* By Bertram Cox, F. R. P. S., and F. C. Tilney. Price, 50 cents, Henry Greenwood & Co., London.

This is a valuable book for those who emphasize the factor of personal control in pictorial photography. It makes clear the necessity of acquaintance with the character of the particular photographic basis of the picture, so as to properly direct the method to successful issue. Much valuable information of a practical character is communicated and the pigment photographer will find in the small compass of the little book good instruction for modification of the print to conform to the personal equation of the artist.

\*

In London they are experimenting with photography in order to make traveling quicker by removing the disturbing noises. The intensity of the latter is measured by a trumpet to catch the sound, and arranged so as to cause a diaphragm to vibrate. This vibration operates a mirror, causing a beam of light to play on a sensitized film. It is said that the study of the plates makes possible the detection of the noises. But detecting a noise and nullifying it are two different things. We await the results of the tests with much interest. Anyhow, the fact that photography has been called in to trace the inconvenience to its source, is another illustration of the manifold uses to which science places the camera.



We note that Famous Players Film Corporation is adopting the Technicolor process for some of its releases. This is the first move on the part of one of the important factors in the motion picture industry toward the adoption of natural color methods for its films. It is reasonable to conjecture that this is the beginning of further advances in the matter. In particular, it should pave the way for the simplest process of all, that of F. E. Ives, described last year in *The Photographic Journal of America*.

The prominent film companies have hitherto been hard to convince that there was anything practicable, as applying to flexible celluloid images in color photography.

An examination of the Ives method should now convince them that it is well within the technical ability of any of the help available to producing companies.

✱

### A NEW FLASHLIGHT POWDER-IGNITING DEVICE

A patent has recently been granted to Mr. Bennett Grotta, of the Atlas Powder Company, Wilmington, Del., for a new flashlight gun. U. S. Pat. 1,480,162. The device is electrically operated, a small, standard two-cell battery concealed in the handle being the source of current. The ignition unit consists of electric match-heads, such as are employed in the explosives trade,

for setting off electric detonators. The circuit may be closed by a switch conveniently located at the base of the handle or by means of a push button attached to one end of an extension cord, the other end of which is plugged into a suitable receptacle of the gun. This feature enables the photographer to operate the device (a) while holding it in his hand, (b) while at any desired distance from the device, (c) while he himself "is in the picture," or (d) he may operate a number of guns simultaneously. A suitable reflector and a metal shield to protect the hand from the flash may be provided at will. The nut, which closes the hollow handle containing the dry battery, bears a standard tripod socket. Among the advantages claimed for this device are (1) certainty of ignition, (2) compactness, (3) ease of ignition, and (4) instantaneous action.

✱

It is necessary at present to distinguish between the terms tele-photo lens, tele-photo attachment, tele-photo system. In the old days a telephoto lens meant a negative lens and mounting by which a regular photographic lens could be brought nearer or further from the negative element. When the complete apparatus was assembled, the new, variable focus lens became a telephoto system.

Inasmuch as the corrections on the telephoto lens really vary according to the separation, in the magnification, there is only one magnification where the various corrections are obtained. The modern telephoto lens or fixed telephoto is therefore more accurate and it is becoming the custom to call this complete "system" the "telephoto lens."

✱

*Dear Sir:*—When I received my June number of *THE CAMERA* it made me feel dreadfully homesick. For your British pictorial photographs brought before me very vividly scenes that I had traversed and photographed many times as man and boy.

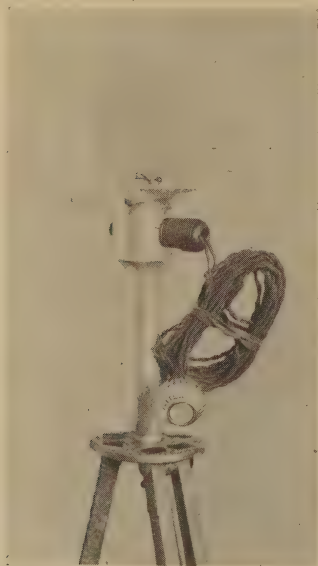
Then after this feeling of homesickness, I was grateful to you for allowing me once more to look upon photographic reproductions of these well remembered scenes.

I have no doubt there are many on this side of the Atlantic, in the United States and Canada, who feel as I do in the matter and entertain grateful thanks to you.

Yours truly,

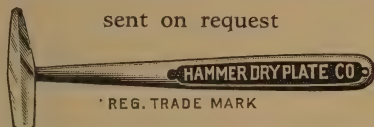
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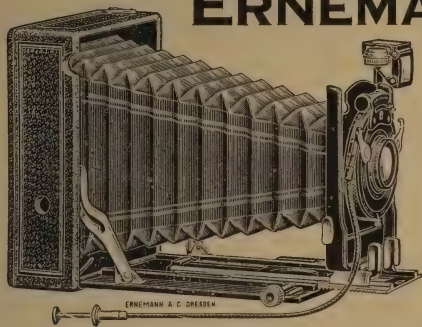
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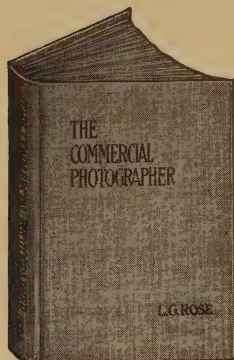


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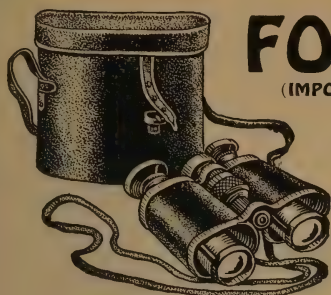
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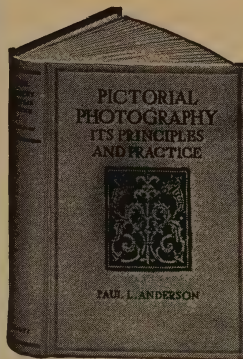
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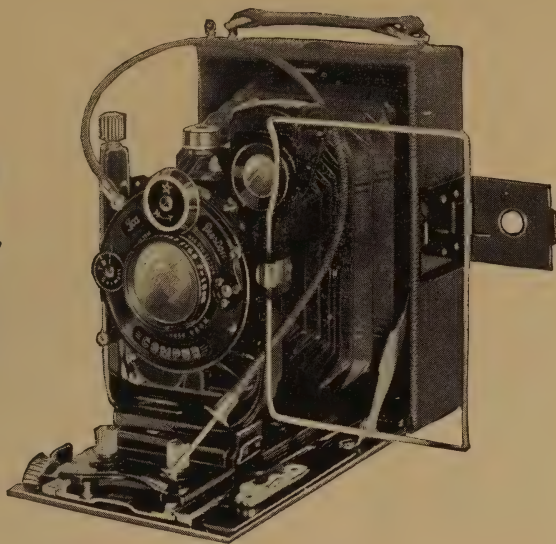
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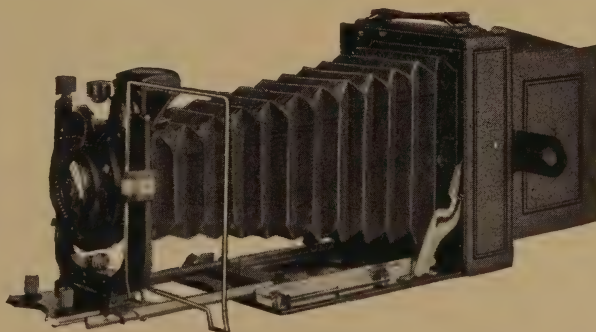
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We used a great many Carl Zeiss instruments during our trip, including seven or eight Carl Zeiss Tessar lenses in our motion picture work; also some Zeiss lenses for still photography. Mr. I. J. Ingraham who took all of the motion pictures, agrees with me that a large percentage of our success in getting good pictures in the Tropics was due to our lenses. These pictures will be shown throughout the country as a Paramount Picture, titled "Around the World in the Speejacks" and I trust you will have the opportunity of seeing them.

Yours very truly

A handwritten signature in dark ink, which appears to read "Albert Y. Gowen". The signature is fluid and cursive, with a long horizontal stroke at the end.

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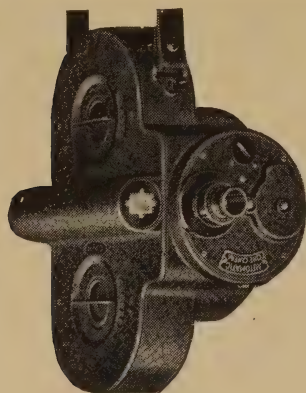
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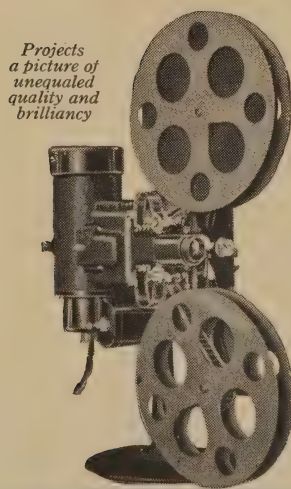
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The **Filmo** Cine Projector—the camera's companion machine—provides for the first time REAL portable projection of high standard. Those most familiar with the past development of portable projectors pronounce this the greatest step ever taken toward popularizing non-theatrical moving pictures.

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In addition to showing your own pictures, film libraries of the 16 m/m standard have already been formed, and at a nominal cost you can rent many reels covering a wide variety of subjects.

The price of the two machines complete is \$360. Available for immediate delivery. See your dealer or send for catalog.



Projects a picture of unequalled quality and brilliancy

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Pioneer and World's Largest Manufacturers of Motion-Picture Equipment of all Kinds

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# ILEXTIGMAT *f*6.3

THE THREE-SHIFT ANASTIGMAT



N high gear hitting on all cylinders, the motor car performs at its best. But for the hard pulls—the emergencies—second and low gear, its reserve power is brought into play.

The ILEXTIGMAT gives such reserve power in a lens.

It, too, performs best in combination (high gear), but it also is prepared for unexpected conditions—photographic emergencies.

Occasions frequently arise where the long foci of the single elements are essential. Lacking the feature of this convertibility, one loses many opportunities—always annoying—often costly.

The ILEXTIGMAT has this triple convertible feature. It can be used in combination or each single element separately—three lenses in one.

And the remarkableness of this new ILEX DEVELOPMENT is that a lens of such merit with these characteristics can be obtained at so low a price.

Literature from your dealer or direct.

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THE WORLD'S FINEST CAMERA IS THE ERNEMANN

# ERNEMANN SPORTSMAN CAMERAS



THE Ernemann Sportsman Camera is a product of 35 years' experimentation in designing an instrument that would meet every need of the Sportsman, however exacting.

It is the most compact camera yet designed, the most efficient in shutter and lens equipment.

Precision workmanship, materials and equipment of unvarying first quality, as well as a price in keeping with lifetime service make Ernemann instruments appreciated by those who desire the best.

The Ernemann Sportsman Camera is held to the eye—with resulting picture as the eye sees. It is equipped with Carl Zeiss or Ernemann Ernotar f.3.5. or f.4.5. anastigmat lenses, capable of correct exposures in unfavorable lights, and of a brilliance of definition that holds through enlargements to almost any size. Most of all, the Sportsman features the Ernemann focal plane shutter, with its self-capping safety device and its 20 speeds up to 1/1000 of a second adjusted through one single turn of a knob—the most efficient shutter yet constructed.



Whatever your photographic requirement, send for booklet descriptive of the new Ernemann Sportsman Camera. It may be just the camera you have long awaited.

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THE MOTOR CRANKS THE CAMERA

## *Motion Pictures the Kodak Way*

Rushing water, swirl of spray, flashing paddles—press the button on your Ciné-Kodak and you're getting it all in motion.

And then back from the trip, you have only to turn the switch on your Kodascope and once more the racing canoes swoop past you and the thrill of the moment is yours again.

Nor are you limited to personal motion pictures of your favorite sports, your vacation trip, or the children. Professional releases—dramas, comedies, etc.—may be rented from Kodascope Libraries, Inc., and projected in your own home.

Price of complete outfit, Ciné-Kodak

with either motor drive or tripod and crank, Kodascope, Screen, etc., \$335. Cost of operating is less than 1/5 of the operating expense of equipment using standard width film, and your finishing by Eastman experts in Eastman laboratories is paid for when you buy the film. *You press the button; we do the rest.*

*Descriptive booklet and full information by mail, on request*

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Your success in selling  
projected portraits de-  
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to show prints that re-  
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*The paper that is made  
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That intangible something one calls style or effect—the thing that gives the picture a distinctiveness all its own—is found in the quality and brilliance of the Vitava emulsion, on the Old Master paper surface.

It's a combination that appeals alike to the professional and the portrait buying public.

In white and buff stocks,  
at your dealer's.

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When success depends upon  
the short exposure, as so often  
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double the number of good  
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*Super Speed*  
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# Eastman Plates

*Cover the entire range  
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Close contact with the photographer plus years of manufacturing experience have enabled us to put into plate emulsions those characteristics of quality which make Eastman Plates the standard for every line of photographic work.

And, as in the past, with these plates goes the Eastman service that helps to maintain quality in your results. Place your order with your dealer today.

## *An Eastman Plate for every purpose*

Eastman 40: A high speed plate for portraiture.

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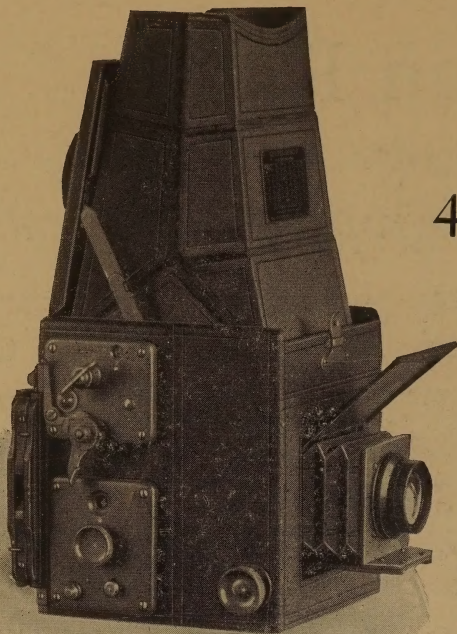
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## 4 x 5 Graflex, *Series B*

Speeds 1/10  
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# For Sport Photography

Watch the action in the hood. As the horse goes over the hurdle or the ball goes over the net, trip the shutter.

With a Graflex it's that easy to put the exciting scene into picture. Guesswork is left out. You *know* when the focus is sharp, you *see* what the view includes.

Graflex, *Series B*, is a unified camera with its Kodak Anastigmat *f*.4.5 permanently set in a rigid metal mount. Two advantages of the 4 x 5 size are that the big image simplifies composition and that the big contact print makes enlarging seldom necessary.

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